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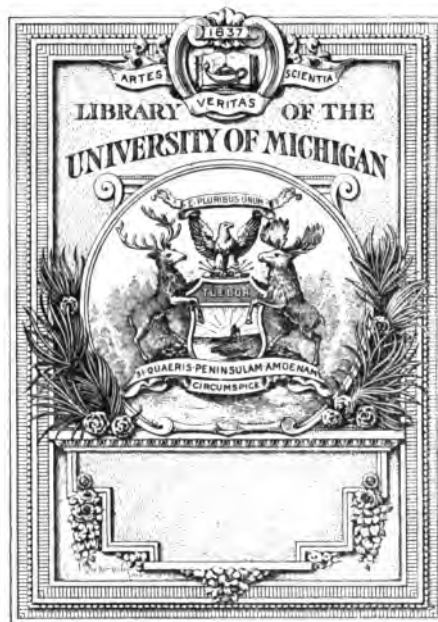
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CALENDAR
OF THE
UNIVERSITY OF MICHIGAN



1895-96

ANN ARBOR, MICH.
PUBLISHED BY THE UNIVERSITY
1896

ANN ARBOR:
THE INLAND PRESS.
1896.

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ANNOUNCEMENTS FOR 1896-97.

1896.

- Jan. 7. University Exercises resumed after Holiday Vacation.
 Feb. 14. (Evening.) FIRST SEMESTER CLOSES.
 Feb. 17. SECOND SEMESTER BEGINS.
 April 10. (Evening.) Recess begins, ending April 20 (evening).
 June 20, 22. *Examination for Admission to the Department of Literature, Science, and the Arts, to the Department of Engineering, and to the Four-Year Course in the School of Pharmacy.*
 June 21. *Baccalaureate Address.*
 June 23. *Class Day.*
 June 24. *Alumni Day.*
 June 24. *Examination for Admission to the College of Dental Surgery.*
 June 25. COMMENCEMENT IN ALL DEPARTMENTS OF THE UNIVERSITY. The Commencement Oration is to be delivered by CHARLES KENDALL ADAMS, LL.D., President of the University of Wisconsin.
 Summer Vacation from June 26 to September 30.
 Sept. 23-28. *Examination for Admission to the Department of Literature, Science, and the Arts, to the Department of Engineering, and to the Four-Year Course in the School of Pharmacy.*
 Sept. 28-30. *Examination for Admission to the Department of Law.*
 Sept. 29, 30. *Examination for Admission to the Department of Medicine and Surgery, to the Two-Year Course in the School of Pharmacy, and to the Homoeopathic Medical College.*
 Sept. 30. *Examination for Admission to the College of Dental Surgery.*
 Oct. 1. FIRST SEMESTER BEGINS IN ALL DEPARTMENTS OF THE UNIVERSITY.
 Nov. — Thanksgiving Recess of three days, beginning Tuesday evening, in all Departments of the University.
 Dec. 18. (Evening.) Holiday Vacation begins in all Departments.

1897.

- Jan. 5. Exercises Resumed.
 Feb. 19. (Evening.) FIRST SEMESTER CLOSES.
 Feb. 22. SECOND SEMESTER BEGINS.
 April 16. (Evening.) Recess begins, ending April 26 (evening).
 July 1. COMMENCEMENT IN ALL DEPARTMENTS OF THE UNIVERSITY.

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JANUARY							FEBRUARY							MARCH							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31					29	30	31					29	30	31				
MAY							JUNE							JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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29	30	31					29	30	31					29	30	31					29	30	31				

BOARD OF REGENTS.

JAMES B. ANGELL, LL.D.,
PRESIDENT.

		TERM EXPIRES
HON. LEVI L. BARBOUR,	<i>Detroit,</i>	Dec. 31, 1897.
HON. WILLIAM J. COCKER,	<i>Adrian,</i>	" 1897.
HON. PETER N. COOK,	<i>Corunna,</i>	" 1899.
HON. HENRY S. DEAN,	<i>Ann Arbor,</i>	" 1899.
HON. HERMAN KIEFER,	<i>Detroit,</i>	" 1901.
HON. FRANK W. FLETCHER,	<i>Alpena,</i>	" 1901.
HON. ROGER W. BUTTERFIELD,	<i>Grand Rapids,</i>	" 1903.
HON. GEORGE A. FARR,	<i>Grand Haven,</i>	" 1903.

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TREASURER.

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(Office at Lansing.).

Members of the Faculties

AND OTHER OFFICERS.*

Permanent Appointments and Appointments for Terms Longer than One Year.

- JAMES B. ANGELL, LL.D., PRESIDENT. South University Avenue.
ALBERT B. PRESCOTT, PH.D., M.D., *Director of the Chemical Laboratory, Professor of Organic Chemistry, and Dean of the School of Pharmacy.* 50 South Ingalls Street.
REV. MARTIN L. D'OOGHE, LL.D., *Professor of the Greek Language and Literature, and Dean of the Department of Literature, Science, and the Arts.* 77 Washtenaw Avenue.
CHARLES E. GREENE, A.M., C.E., *Professor of Civil Engineering, and Dean of the Department of Engineering.* 37 East William Street.
JONATHAN TAFT, M.D., D.D.S., *Professor of the Principles and Practice of Oral Pathology and Surgery, and Dean of the College of Dental Surgery.* 35 South Thayer Street.
WILLIAM H. PETTEE, A.M., *Professor of Mineralogy Economic Geology, and Mining Engineering.* 52 Thompson Street.
JOHN A. WATLING, D.D.S., *Professor of Operative and Clinical Dentistry.* 121 North Huron Street, Ypsilanti.
EDWARD L. WALTER, PH.D., *Professor of Romance Languages and Literatures.* 93 South State Street.
ISAAC N. DEMMON, A.M., *Professor of English and Rhetoric.* 76 Washtenaw Avenue.
WILLIAM H. DORRANCE, D.D.S., *Professor of Prosthetic Dentistry and Dental Metallurgy.* 42 South Ingalls Street.
ALBERT H. PATTENGILL, A.M., *Professor of Greek.* 119 Hill Street.

*The names of Professors (including Librarian), Junior Professors (including Director of the Gymnasium), Assistant Professors (including Superintendent of Shops), and other officers, are placed in their appropriate divisions, according to term of appointment and length of continuous service with present rank.

-
- MORTIMER E. COOLEY, M.E., *Professor of Mechanical Engineering.* 32 Packard Street.
- WILLIAM J. HERDMAN, PH.B., M.D., *Professor of Nervous Diseases and Electrotherapeutics.* 48 East Huron Street.
- WOOSTER W. BEMAN, A.M., *Professor of Mathematics.* 61 East Kingsley Street.
- VICTOR C. VAUGHAN, PH.D., M.D., *Professor of Hygiene and Physiological Chemistry, Director of the Hygienic Laboratory, and Dean of the Department of Medicine and Surgery.* 15 South State Street.
- * THOMAS M. COOLEY, LL.D., *Professor of American History and Constitutional Law.* 76 South State Street.
- CHARLES S. DENISON, M.S., C.E., *Professor of Descriptive Geometry, Stereotomy, and Drawing.* 23 South Division Street.
- HENRY S. CARHART, LL.D., *Professor of Physics, and Director of the Physical Laboratory.* 7 Monroe Street.
- LEVI T. GRIFFIN, A.M., *Fletcher Professor of Law.* 148 Henry Street, Detroit.
- RAYMOND C. DAVIS, A.M., *Librarian.* 15 Church Street.
- VOLNEY M. SPALDING, PH.D., *Professor of Botany.* 50 Thompson Street.
- HENRY C. ADAMS, PH.D., *Professor of Political Economy and Finance.* 125 Hill Street.
- † CALVIN THOMAS, A.M., *Professor of Germanic Languages and Literatures.*
- BURKE A. HINSDALE, LL.D., *Professor of the Science and the Art of Teaching.* 74 Washtenaw Avenue.
- RICHARD HUDSON, A.M., *Professor of History.* 40 South Ingalls Street.
- BRADLEY M. THOMPSON, M.S., LL.B., *Jay Professor of Law.* 25 East University Avenue.
- ALBERT A. STANLEY, A.M., *Professor of Music.* 19 South Ingalls Street.
- FRANCIS W. KELSEY, PH.D., *Professor of the Latin Language and Literature.* 12 Tappan Street.
- JEROME C. KNOWLTON, A.B., *Marshall Professor of Law.* 127 Hill Street.
- CHARLES B. NANCREDE, A.M., M.D., *Professor of Surgery and Clinical Surgery in the Department of Medicine and Surgery.* 4 Cornwell Place
-

* Professor Cooley has leave of absence, but delivers a brief course of lectures on the law of interstate commerce to advanced students in the Department of Law.

† Absent on leave.

- FLEMMING CARROW, M.D., *Professor of Ophthalmic and Aural Surgery and Clinical Ophthalmology in the Department of Medicine and Surgery.* 51 East Huron Street.
- OTIS C. JOHNSON, Ph.C., A.M., *Professor of Applied Chemistry.* 52 South Thayer Street.
- PAUL C. FREER, Ph.D., M.D., *Professor of General Chemistry, and Director of the Laboratory of General Chemistry.* 42 Forest Avenue.
- JAMES N. MARTIN, Ph.M., M.D., *Professor of Obstetrics and Diseases of Women in the Department of Medicine and Surgery.* 16 North State Street.
- NELVILLE S. HOFF, D.D.S., *Professor of Dental Materia Medica and Dental Mechanism.* 79 South State Street.
- GEORGE DOCK, M.D., *Professor of the Theory and Practice of Medicine and Clinical Medicine, and of Pathology, in the Department of Medicine and Surgery.* 14 Cornwell Place.
- JOHN W. CHAMPLIN, LL.D., *Professor of Law.* Grand Rapids.
- ANDREW C. McLAUGHLIN, A.B., LL.B., *Professor of American History.* 25 Church Street.
- JOSEPH B. DAVIS, C.E., *Professor of Geodesy and Surveying.* 51 South Ingalls Street.
- ASAPH HALL, JR., Ph.D., *Professor of Astronomy, and Director of the Observatory.* Observatory.
- ISRAEL C. RUSSELL, M.S., C.E., *Professor of Geology.* Corner of Hill and Oxford Streets.
- WARREN P. LOMBARD, A.B., M.D., *Professor of Physiology and Histology.* Oxford Road.
- FLOYD R. MECHEM, A.M., *Tappan Professor of Law.* 3 Wilmot Street.
- JACOB E. REIGHARD, Ph.B., *Professor of Zoology, and Director of the Zoological Laboratory and the Zoological Museum.* 12½ North Thayer Street.
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- ALEXIS C. ANGELL, A.B., LL.B., *Professor of Law.* 19 Watson Street, Detroit.
- OTTO KIRCHNER, A.M., *Professor of Law.* 37 East Warren Avenue, Detroit.
- ARTHUR R. CUSHNY, A.M., M.D., *Professor of Materia Medica and Therapeutics in the Department of Medicine and Surgery.* 44 East Madison Street.

-
- JOHN C. ROLFE, PH.D., *Professor of Latin.*
47 South Division Street.
- J. PLAYFAIR McMURRICH, PH.D., *Professor of Anatomy.*
92 Ann Street.
- HARRY B. HUTCHINS, PH.B., *Professor of Law, and Dean of
the Department of Law.* 2 Monroe Street.
- THOMAS A. BOGLE, LL.B., *Professor of Law in charge of the
Practice Court.* 128 Hill Street
- WILBERT B. HINSDALE, A.M., M.D., *Professor of Materia
Medica, Therapeutics, and Clinical Medicine, and Dean of the
Homœopathic Medical College.* 74 Washtenaw Avenue.
- OSCAR LE SEURE, M.D., *Professor of Surgery and Clinical Sur-
gery in the Homœopathic Medical College.*
25 Rowena Street, Detroit.
- ROY S. COPELAND, M.D., *Professor of Ophthalmology, Otology,
and Pædology, in the Homœopathic Medical College.*
46 Catharine Street.
- FREDERICK G. NOVY, Sc.D., M.D., *Junior Professor of Hygiene
and Physiological Chemistry.* 25½ Lawrence Street.
- GEORGE HEMPL, PH.D., *Junior Professor of English.*
95 East University Avenue.
- EDWARD D. CAMPBELL, B.S., *Junior Professor of Metallurgy
and Metallurgical Chemistry.* 108 Hill Street.
- FRED M. TAYLOR, PH.D., *Junior Professor of Political Economy
and Finance.* 17 Church Street.
- JAMES B. FITZGERALD, M.D., *Director of the Gymnasium.*
45 William Street.
- PAUL R. DEPONT, A.B., B.S., *Assistant Professor of French,
Registrar of the Department of Literature, Science, and the
Arts, and Registrar of the Department of Engineering.*
23 East Jefferson Street.
- CLARENCE G. TAYLOR, B.S., *Superintendent of Shops in En-
gineering Laboratory.* 55 Washtenaw Avenue.
- JOSEPH H. DRAKE, A.B., *Assistant Professor of Latin.*
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- FRED N. SCOTT, PH.D., *Assistant Professor of Rhetoric.*
1 College Street.
- ALEXANDER ZIWET, C.E., *Assistant Professor of Mathematics.*
44 East Madison Street.
- GEORGE W. PATTERSON, JR., A.M., S.B., *Assistant Professor
of Physics.* 14 South University Avenue.
- FRANK C. WAGNER, A.M., B.S., *Assistant Professor of Mechan-
ical Engineering.* 73 Washtenaw Avenue.

-
- G. CARL HUBER, M.D., *Assistant Professor of Histology.*
24 East Ann Street.
- ALVISO B. STEVENS, PH.C., *Assistant Professor of Pharmacy.*
13 Oakland Avenue.
- JOHN O. REED, PH.M., *Assistant Professor of Physics.*
34 East Kingsley Street.
- WILLIAM A. CAMPBELL, B.S., M.D., *Assistant Professor of
Anatomy, and Secretary of the Faculty of the Department of
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- DEAN C. WORCESTER, A.B., *Assistant Professor of Zoology,
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- FREDERICK C. NEWCOMBE, B.S., PH.D., *Assistant Professor
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- WILLIAM F. BREAKEY, M.D., *Lecturer on Dermatology.*
54 East Huron Street.
- *JOSEPH L. MARKLEY, PH.D., *Instructor in Mathematics.*
- MORITZ LEVI, A.B., *Instructor in French.* 95 Washtenaw Avenue.
- ELMER A. LYMAN, A.B., *Instructor in Mathematics.*
31 East Liberty Street.
- GEORGE O. HIGLEY, M.S., *Instructor in General Chemistry.*
14 Olivia Place.
- DAVID M. LICHTY, M.S., *Instructor in General Chemistry.*
47 Packard Street.
- *JOHN R. EFFINGER, JR., PH.M., *Instructor in French.*
- ERNST H. MENSEL, A.M., *Instructor in German.*
28 Monroe Street.
- EARLE W. DOW, A.B., *Instructor in History.* 82 Hill Street.
- ARTHUR G. HALL, B.S., *Instructor in Mathematics.*
63½ South Division Street.
- JOSEPH H. VANCE, LL.B., *Assistant Librarian in charge of the
Law Library.* Ann Arbor Town.
- JOSEPH CLARK, *Superintendent of the University Hospital.*
8 Cornwell Place.
- HAMILTON REEVE, *Superintendent of Buildings and Grounds.*
44 East University Avenue.

Non-Resident Lecturers on Special Topics for 1895-96.

- MARSHALL D. EWELL, LL.D., *Lecturer on Medical Jurispru-
dence.* 59 Clark Street, Chicago, Ill.
- JAMES L. HIGH, LL.D., *Lecturer on Injunctions and Receivers.*
Chicago, Ill.

*Absent on leave.

- JOHN B. CLAYBERG, LL.B., *Lecturer on Mining Law.*
 Helena, Mon.
 MELVILLE M. BIGELOW, PH.D., *Lecturer on Insurance.*
 Cambridge, Mass.
 HENRY H. SWAN, A.M., *Lecturer on Admiralty Law.*
 664 Woodward Avenue, Detroit.
 OSCAR R. LONG, M.D., *Lecturer on Mental and Nervous Dis-*
eases in the Homœopathic Medical College. Ionia.
 FRANK F. REED, A.B., *Lecturer on Copyright Law.* Chicago.
 ALBERT H. WALKER, LL.B., *Lecturer on Patent Law.*
 Hartford, Conn.

Other Appointments for 1895-96.

- ALFRED H. LLOYD, PH.D., *Acting Professor of Philosophy.*
 41 South Twelfth Street.
 GEORGE A. HENCH, PH.D., *Acting Professor of German.*
 21 Monroe Street.
 HORACE L. WILGUS, M.S., *Acting Professor of Law.*
 83 Hill Street.
 MYRON H. PARMELEE, M.D., *Acting Professor of Gynecology*
and Obstetrics in the Homœopathic Medical College.
 1717 Jefferson Street, Toledo, O.
 MAX WINKLER, PH.D., *Assistant Professor of German.*
 14 South State Street.
 VICTOR C. VAUGHAN, PH.D., M.D., *Lecturer on Toxicology in*
its Legal Relations in the Department of Law.
 15 South State Street.
 HENRY C. ADAMS, PH.D., *Lecturer on the Railroad Problem in*
the Department of Law. 125 Hill Street.
 ANDREW C. McLAUGHLIN, A.B., LL.B., *Lecturer on Constitu-*
tional Law and Constitutional History in the Department of
Law. 25 Church Street.
 RICHARD HUDSON, A.M., *Lecturer on Comparative Constitu-*
tional Law in the Department of Law. 40 South Ingalls Street.
 JONATHAN A. C. HILDNER, A.M., *Instructor in German.*
 101 South Main Street.
 SIMON M. YUTZY, M.D., *Instructor in Anatomy.*
 54 East Huron Street.
 ELIAS F. JOHNSON, B.S., LL.M., *Instructor in Law.*
 31 North University Avenue.
 LORENZO N. JOHNSON, A.M., *Instructor in Botany.*
 24 Forest Avenue.

- MOSES GOMBERG, Sc.D., *Instructor in Organic Chemistry.*
69 South University Avenue.
- CLARENCE G. WRENTMORE, B.S., *Instructor in Descriptive
Geometry and Drawing.* 31 South Fourth Avenue.
- KARL E. GUTHE, Ph.D., *Instructor in Physics.*
36 East Kingsley Street.
- TOBIAS DIEKHOFF, A.B., *Instructor in German.*
38 Packard Street.
- LOUIS P. HALL, D.D.S., *Instructor in Dental Anatomy and
Operative Dentistry.* 132 Hill Street.
- CLARENCE L. MEADER, A.B., *Instructor in Latin, and Lecturer
on Roman Law in the Department of Law.*
33 South Thayer Street.
- WALLACE S. ELDEN, A.M., *Instructor in French.*
49 East University Avenue.
- JOHN W. DWYER, LL.M., *Instructor in Law.*
53 East Kingsley Street.
- THOMAS W. HUGHES, LL.M., *Instructor in Law*
24 South State Street.
- FRANK W. NAGLER, B.S., *Instructor in Electrotherapeutics.*
37 Monroe Street.
- WALTER DENTON SMITH, LL.B., *Instructor in Law.*
29 East Liberty Street.
- WILLIAM D. JOHNSTON, A.M., *Instructor in History.*
42 Broadway.
- GEORGE REBEC, Ph.B., *Instructor in Philosophy.*
95 Washtenaw Avenue.
- FRANK R. LILLIE, Ph.D., *Instructor in Zoology.*
43½ South Twelfth Street.
- KEENE FITZPATRICK, *Instructor in the Gymnasium.*
45 William Street.
- CHARLES H. COOLEY, Ph.D., *Instructor in Sociology.*
35 South Twelfth Street.
- WILLIAM H. WAIT, Ph.D., *Instructor in Greek and Sanskrit.*
6 Olivia Place.
- ALDRED S. WARTHIN, Ph.D., M.D., *Instructor in Pathology.*
14 South State Street.
- JAMES W. GLOVER, Ph.D., *Instructor in Mathematics.*
44 East Kingsley Street.
- ERNST VOSS, Ph.D., *Instructor in German.* 33 South Ingalls Street.
- LOUIS A. STRAUSS, Ph.M., *Instructor in English.*
47 South Division Street.

- EDWIN C. GODDARD, Ph.B., *Instructor in Mathematics.*
12 Geddes Avenue.
- CHARLES R. GILLIS, Ph.B., *Instructor in Astronomy.*
8 Thompson Street.
- EDGAR E. BRANDON, A.B., *Instructor in French.*
49 East University Avenue.
- HENRY F. L. REICHLE, A. M., *Instructor in Latin.*
23 North University Avenue.
- EDGAR PIERCE, Ph.D., *Instructor in Philosophy.*
3 Thompson Street.
- HERBERT J. GOULDING, B.S., *Instructor in Descriptive Geometry
and Drawing.*
31 South Fourth Avenue.
- HENRY L. COAR, A.M., *Instructor in Mathematics.*
5 Hamilton Park.
- VICTOR E. FRANCOIS, *Instructor in French.*
67 South Seventh Street.
- PERRY F. TROWBRIDGE, Ph.B., *Instructor in Organic Chem-
istry, and Accountant in the Chemical Laboratory.*
10 Observatory Street.
- JAMES G. LYNDS, M.D., *Demonstrator of Obstetrics and Gyna-
cology in the Department of Medicine and Surgery.*
21 South State Street.
- ALICE L. HUNT, *Assistant in Drawing.*
16 South Thayer Street.
- FRED P. JORDAN, A.B., *Assistant in the General Library in
charge of Catalogue.*
9 Olivia Place.
- CYRENUS G. DARLING, M.D., *Demonstrator of Surgery in the
Department of Medicine and Surgery, and Clinical Lecturer on
Oral Pathology and Surgery in the College of Dental Surgery.*
38 East University Avenue.
- BYRON A. FINNEY, A.B., *Assistant in the General Library in
charge of Circulation.*
74 East Huron Street.
- CHARLES T. MCCLINTOCK, Ph.D., M.D., *Assistant in Hygiene.*
78 East Washington Street.
- JAMES P. BRIGGS, Ph.C., *Pharmacist in the University Hospital.*
36 Catharine Street.
- ALLISON W. HAIDLE, D.D.S., *Demonstrator of Dental Mechan-
ism.*
60 Packard Street.
- JEANNE C. SOLIS, M.D., *Assistant to the Professor of Nervous
Diseases in the Department of Medicine and Surgery.*
79 West Huron Street.
- JOHN B. JOHNSTON, Ph.B., *Zoological Assistant in General
Biology.*
31 North University Avenue.

- WARREN H. LEWIS, B.S., *Assistant in Vertebrate Morphology.*
37 Church Street.
- JOSEPH FOSTER, B.S., M.D., *Demonstrator of Ophthalmology
in the Department of Medicine and Surgery.*
78 East Washington Street.
- THEODORE L. CHADBOURNE, B.S., M.D., *Demonstrator of
the Theory and Practice of Medicine in the Department of Medi-
cine and Surgery.* 78 East Washington Street.
- JOHN W. FOLEY, M.D., *Assistant to the Professor of Obstetrics
and Diseases of Women in the Department of Medicine and
Surgery.* 95 East Huron Street.
- CARLTON D. MORRIS, M.D., *Assistant in Physiological Chem-
istry.* 47 South Twelfth Street.
- JAMES SEYMOUR, Ph.C., *Assistant in Pharmacy.*
28 East Huron Street.
- WILLARD C. GORE, Ph.M., *Assistant in English.*
42 South Thayer Street.
- FRED W. PALMER, M.D., *House Surgeon in the University
Hospital.* University Hospital.
- CHARLES H. WILLIAMS, Ph.B., Ph.C., *Assistant in Pharmacog-
nomy.* 3 West William Street.
- SAMUEL A. MATTHEWS, M.D., *Assistant in Materia Medica in
the Department of Medicine and Surgery.* 11 South State Street.
- CHARLES D'A. WRIGHT, M.D., *Assistant to the Professor of
Ophthalmic and Aural Surgery and Clinical Ophthalmology in
the Department of Medicine and Surgery.* 169 West Huron Street.
- JESSE F. ORTON, A.M., *Assistant in Political Economy.*
44½ Washtenaw Avenue.
- CHARLES E. MARSHALL, Ph.B., *Assistant and Dispensing Clerk
in the Hygienic Laboratory.* 18 North Fifth Avenue.
- CHARLES H. GRAY, B.L., *Assistant in English.* 4 Monroe Street.
- EDWIN C. ROEDDER, A.M., *Assistant in German.*
21 Forest Avenue.
- JOHN H. NEELEY, D.D.S., *Assistant Demonstrator of Practical
Dentistry.* 19 East Liberty Street.
- CARLTON R. ROSE, Ph. B., *Assistant in Qualitative Chemistry.*
66 South State Street.
- ARTHUR H. JOHNSON, M.D., *Assistant to the Professor of
Surgery and Clinical Surgery in the Department of Medicine
and Surgery.* 11 South State Street.
- JAMES B. POLLOCK, B.S., *Assistant in Botany.* 10 Forest Avenue.
- ALBERT A. PASSOLT, B.S., *Assistant in Physics.*
39 Thompson Street.

Penoyer Shuman

WALTER N. FOWLER, M.D., *Medical Superintendent of the University Hospital (Homœopathic).*

University Hospital (Homœopathic).

MARY L. WELLMAN LOOMIS, A.M., *Assistant in the General Library.* 34 Thompson Street.

PENOYER L. SHERMAN, Ph.D., *Assistant in General Chemistry.* 27 East Jefferson Street.

WILLIAM S. LOOMIS, M.D., *House Physician in the University Hospital.* University Hospital.

*CASH C. MANTZ, M.D., *Assistant to the Acting Professor of Gynecology and Obstetrics in the Homœopathic Medical College.*

ROBERT MCGREGOR, M.D., *Demonstrator of Nervous Diseases in the Department of Medicine and Surgery.*

67 East Huron Street.

Special Assistants in the Engineering Laboratory.

ROBERT A. WINSLOW, *Foundry.* 32 Wall Street.

JOHN M. SMOOTS, *Iron Room.* 80 Forest Avenue.

HORACE T. PURFIELD, *Wood Room.* 36 South Twelfth Street.

THOMAS ORR, *Forge Shop.* 981 Jefferson Avenue, Detroit.

*Deceased.

UNIVERSITY OF MICHIGAN.

THE UNIVERSITY AND THE STATE.

THE University of Michigan is a part of the public educational system of the State. The governing body of the institution is a Board of Regents, elected by popular vote for terms of eight years, as provided in the Constitution of the State. In accordance with the law of the State, the University aims to complete and crown the work that is begun in the public schools, by furnishing ample facilities for liberal education in literature, science, and the arts, and for thorough professional study of engineering, medicine, pharmacy, law, and dentistry. Through the aid that has been received from the United States and from the State, it is enabled to offer its privileges, with only moderate charges, to all persons of either sex, who are qualified for admission. While Michigan has endowed her University primarily for the higher education of her own sons and daughters, it must be understood that she also opens the doors of the institution to all students, wherever their homes. It is in this broad, generous, and hospitable spirit, that the University has been founded, and that it endeavors to do its work.

ORGANIZATION OF THE UNIVERSITY.

The University comprises the Department of Literature, Science, and the Arts (including the Graduate School and the Summer School), the Department of Engineering, the Department of Medicine and Surgery, the Department of Law, the School of Pharmacy, the Homœopathic Medical College, and the College of Dental Surgery. Each Department school, and college, has its special Faculty. The University Senate is

composed of all the faculties, and considers questions of common interest and importance to them all.

In the Department of Literature, Science, and the Arts, different lines of study lead to the degrees of Bachelor of Arts, Bachelor of Philosophy, Bachelor of Science, Bachelor of Letters, the corresponding Masters' degrees, and the degrees of Doctor of Philosophy, Doctor of Science, and Doctor of Letters.

In the professional schools degrees are given as follows: In the Department of Engineering, the degrees of Bachelor of Science, Civil Engineer, Mechanical Engineer, and Electrical Engineer; in the Department of Medicine and Surgery, the degree of Doctor of Medicine; in the Department of Law, the degrees of Bachelor of Laws and Master of Laws; in the School of Pharmacy, the degrees of Pharmaceutical Chemist and Bachelor of Science; in the Homœopathic Medical College, the degree of Doctor of Medicine; in the College of Dental Surgery, the degrees of Doctor of Dental Surgery and Doctor of Dental Science.

Students in any department of the University may enter the classes in any other department, upon obtaining permission from the Faculties of the respective departments.

THE LIBRARIES.

The libraries of the University are the General Library, the Medical Library, the Law Library, and the Library of the College of Dental Surgery. They contained in the aggregate, September 30, 1895, 98,707 volumes, 17,241 unbound pamphlets, and 1,151 maps.

THE GENERAL LIBRARY contains 79,342 volumes, 15,759 unbound pamphlets, and 1,151 maps. In this enumeration are included the following special collections: Parsons Library (political economy), 4,325 volumes and 5,000 pamphlets; McMillan Shakespeare Library, 3,752 volumes; Hagerman Collection (history and political science), 2,660 volumes; Goethe Library, 892 volumes; Dorsch Library (miscellaneous), 1,676 volumes and 148 pamphlets.

Four hundred and fifty periodicals are taken.

The catalogue of the library is the usual card catalogue of authors and subjects.

Members of the faculties and other officers of the University may draw books from the library, subject to certain restrictions. To all other persons it is a reference library. The reading room for general use will seat 210 readers. Separate rooms are provided for advanced students where work is pursued with the necessary books at hand.

The library is open for consultation fourteen hours daily during the academic year, and six hours daily during the three months of the sum-

mer vacation. The only exceptions to the above are Sundays and legal holidays.

THE MEDICAL LIBRARY, containing 6,815 volumes and 1,482 unbound pamphlets, is shelved with the General Library, and is consulted under the same regulations. One hundred and ten medical journals are regularly received.

THE LAW LIBRARY, containing 11,805 volumes, occupies the large room on the first floor of the law building. In 1885 it was greatly increased by the generosity of Mr. Christian H. Buhl, of Detroit, who presented to the University a large collection of law books. Mr. Buhl also left by will the sum of \$10,000 for the use of this library.

THE LIBRARY OF THE COLLEGE OF DENTAL SURGERY is shelved in a room in the dental building. It contains several sets of valuable periodicals and many of the most important treatises on the theory and practice of dentistry. The whole number of volumes is 745. Thirteen dental periodicals are taken.

The income of the FORD BEQUEST of \$20,000 and of the COVL BEQUEST of \$10,000, is now available for the increase of the General Library.

THE ASTRONOMICAL OBSERVATORY.

The Observatory is known as the Detroit Observatory, having been founded through the liberality of citizens of Detroit. Valuable additions and improvements have been made by contributions from several sources. The building consists of a main part, with a movable dome, and two wings. The meridian circle in the east wing was presented by Mr. Henry N. Walker, of Detroit. It was constructed by Pistor & Martins, of Berlin. In the main part are mounted clocks by Tiede and Howard. The west wing contains the observatory library. It connects with the residence of the Director. The refracting telescope, mounted in the dome, has an object glass thirteen inches in diameter. It was constructed by the late Henry Fitz, of New York.

A small observatory near the main building is used in the work of instruction. It contains an equatorial telescope of six inches aperture and a transit instrument of three inches aperture, with zenith telescope attachment.

THE MUSEUMS.

The University Museums contain collections illustrative of natural history, the industrial arts, chemistry, materia medica, anatomy, archæology, ethnology, the fine arts, and history, arranged in such a way as to

render them accessible both to students and to visitors. The University affords a secure depository for objects of value and curiosity, and it is hoped that frequent gifts will be made to its several museums.

The museum building contains the collections in natural history, the industrial arts, archæology and ethnology, and the Chinese exhibit. The collections of works of art, including historical medallions and coins, are in the art gallery.

The following descriptions indicate the character of some of the collections belonging to the University. The collections specially used for instruction in medicine and in dentistry will be found described in the chapters devoted to the medical and dental schools.

NATURAL HISTORY.

I. THE MINERALOGICAL COLLECTION comprises about 6,000 specimens. It embraces about 2,500 specimens (principally European) purchased of the late BARON LEDERER, and known as the LEDERER COLLECTION; and, besides others, a rich collection of the MINERAL SPECIES OF MICHIGAN, including all varieties of copper ore and associated minerals from the Lake Superior mining region. Extensive additions to the collection have recently been made.

II. THE GEOLOGICAL COLLECTION consists of:

1. The large series of lithological and palæontological specimens brought together by the State geological survey, of which over a hundred fossil species have become the types of original descriptions.

2. The WHITE COLLECTION, consisting of 1,018 distinct entries, 6,000 specimens, of invertebrate fossils.

3. The ROMINGER COLLECTION, embracing about 5,000 species of invertebrate fossils, represented by at least 25,000 specimens. The collection contains (1) the types of all the palæozoic corals described by Dr. Rominger in the Geological Report of Michigan, volume iii.,—not alone the specimens figured, but numerous specimens of each species, which are not duplicates, but illustrations of different characters and varieties; (2) a collection of *Stromatoporoids*—probably the largest and finest in the world; (3) a similar collection of *Bryozoa*; (4) palæozoic fossils belonging to all the other classes; (5) European fossils of all classes and ages in large number—the sponges forming, with the American specimens, a collection of great interest. Since the purchase of this collection by the University, Dr. Rominger has added to it more than 250 species of invertebrate fossils, represented approximately by 1,000 specimens, among which there are many of great value.

4. SMITHSONIAN DEPOSITS, consisting, for the present, of a collection of specimens of foreign and domestic building stones, and twenty-three specimens of fossils from the Upper Missouri.

5. MISCELLANEOUS DONATIONS, COLLECTIONS, AND PURCHASES.

including a series illustrative of the metalliferous regions of the Upper Peninsula, collected by the late Professor Winchell, an interesting collection of fossils, chiefly Cretaceous, from the Yellowstone Valley, presented by the late General Custer, U. S. A., and a series of six to eight hundred rock species and varieties from the Drift of Ann Arbor, collected, dressed to standard size and form, and presented by the late Miss Eliza J. Patterson. A collection of 150 specimens of ores and rocks has recently been presented by the U. S. National Museum.

The entire collection is estimated to contain approximately 17,000 entries and about 60,000 specimens, almost all of which are invertebrate fossils.

The collection has recently been enlarged by the following donations, exchanges, etc., acknowledged in the Calendar for 1894-5: Four specimens of silicified tree-fern trunks, from the Carboniferous rocks of Ohio, presented by Dr. C. Rominger; well preserved vertebrate fossils, ammonites and corals, from Wyoming, from Capt. R. H. Wilson, U. S. A., Fort McKinney, Wyo.; five specimens of paving blocks of trap and granite, from Dr. G. K. Dickinson, of Jersey City, N. J.; siliceous concretions and a few fossils from Bayport, Mich., from Professor Russell; about 100 specimens of Palæozoic fossils from Wisconsin, from the University of Wisconsin; fifty specimens of Tertiary fossils from Alabama, from the Geological Survey of Alabama; sixty specimens of Palæozoic fossils from New York, from Cornell University; samples of Eozoon, Carboniferous mollusks, and metamorphic rocks, from Canada, from McGill College; forty specimens of Clinton fossils from New York, from Hamilton College; a small collection of Hamilton fossils from New York, from Colgate University; about fifty species of Tertiary fossils from the Atlantic coast, samples of gneiss from New York city, and twelve samples of petroleum from as many localities in the United States, from the University of the City of New York.

During the past year the following gifts have been received:—

Thirty-nine specimens of copper ore and associated rocks, from the Wolverine copper mine, Houghton Co., Mich., presented by Mr. Fred Smith.

Seven specimens of native copper and associated rock, from the Calumet and Hecla Mine, Houghton Co., Mich., presented by the Calumet and Hecla Mining Company.

Twenty-five specimens of asphaltum and of petroleum from various localities, presented by Mr. S. F. Peckham.

Samples of brine and salt from Percy's salt well, Mason Co., Mich., presented by Mr. H. C. Mendelsohn.

Two fine samples of glaciated stones from Frankfort, Mich., presented by Mr. E. N. Slocum.

Forty species of Cretaceous and Tertiary fossils from Texas, presented by the Geological Survey of Texas.

III. THE ZOOLOGICAL COLLECTIONS are very large. They comprise a series illustrative of the fauna of Michigan and other northern and western States; a collection of the animals of the Pacific Coast made by Lieutenant Trowbridge; many valuable specimens collected in the Philippine Islands by Dr. Steere in the years 1887 and 1888; and specimens from other foreign countries obtained through the medium of the Smithsonian Institution.

The BEAL-STEERE ZOOLOGICAL COLLECTION, made by Dr. Steere in the years 1870 to 1876, comprises numerous corals, shells, insects, birds, and mammals from South America, China, Formosa, the Philippines, and the Moluccas.

IV. THE BOTANICAL COLLECTION contains, in addition to Michigan plants collected by the public surveys, several valuable herbaria and sets of plants that have been presented to the University from time to time. Among these, some of the most important are the HOUGHTON HERBARIUM, the SAGER HERBARIUM, the AMES HERBARIUM, the HARRINGTON COLLECTION, the BEAL-STEERE BOTANICAL COLLECTION, the ADAMS-JEWETT COLLECTION, and the GARRIGUES COLLECTION, all of which have been described in Calendars of previous years.

Among the more recent acquisitions are Collins, Holden, and Setchell's *Phycotheca Boreali-Americana*, Briosi and Cava's *Funghi Parassiti*, Seymour and Earle's *Economic Fungi*, the continuation of Ellis's *North American Fungi*, presented by Mr. Joseph B. Whittier, and large additions to the cryptogamic flora of Michigan, arranged and catalogued by Mr. L. N. Johnson.

The whole botanical cabinet contains about 70,000 specimens, representing 10,000 species under 20,000 entries.

CHINESE EXHIBIT.

In 1885 the Chinese Government presented to the University the exhibit which it sent to the New Orleans Exposition. The whole collection, numbering several thousand specimens, is now on exhibition in a room set apart for its reception in the museum building. It illustrates with special fulness the varieties of Chinese cotton, the Chinese processes of manufacturing cotton, and the finished products of cotton and silk. There are many articles showing the skill of the Chinese in working in wood, in ivory, and in porcelain, in embroidery, and in painting on glass and on silk.

CHEMISTRY AND PHARMACOGNOSY.

THE MUSEUM OF APPLIED CHEMISTRY comprises collections in educational chemistry, the chemical industries, pharmacy, and pharmacog-

nosy. It occupies a floor space of 2,500 square feet in the chemical building, and is provided with permanent cases.

The principles of chemical science are illustrated by groups of synthetic products, as progressive formations, and by related compounds, both natural and artificial.

The chemical industries are represented by collections of the materials and the successive products of manufacture, and the resources and methods of industrial art. The outlines of chemical technology are presented with models and plans, giving object lessons in the modern production of alkalies and acids, dyes and pigments, soaps, distillates, etc.

In pharmacognosy, the collection of medicinal plants is extensive and well chosen for instruction both in botany and in commercial history. The crude drugs are displayed in comparison with their active constituents, each in its proportional quantity. Pharmacy is exemplified in the preparations of the pharmacopœia and the appliances of skilful manipulation.

Of all these collections a good share originates in the work of students engaged in special lines of study and research.

ARCHÆOLOGY AND ETHNOLOGY.

This department contains a collection of the arms, agricultural implements, carpenter's tools, musical instruments, and idols of the Chinese, belonging to the BEAL-STEERE COLLECTION, together with many articles of domestic and warlike use among the North American Indians and the Islanders of the South Pacific, numerous remains of the ancient Peruvians, and many specimens of clothing, art, etc., of the American Indians, modern Peruvians, Formosans, and natives of the East Indies and Alaska. The Chinese exhibit above referred to contains a large number of articles illustrative of ethnology. From the Smithsonian Institution there have been received a comprehensive collection of casts of objects from Europe and from the mounds of the Ohio valley, and a fine collection of pottery from the cliff dwellings of New Mexico and Arizona. The valuable collection made by the late David DePue, mostly from Washtenaw County, Mich., and a collection of flint implements from Denmark have recently been added.

THE FINE ARTS AND HISTORY.

The works of art belonging to the University are on exhibition in the galleries provided for them in the library building. A printed catalogue, prepared by Professor D'Ooge, contains fuller descriptions than can here be given. The collection was begun in 1855. It contains a gallery of casts, in full size and in reduction, of some of the most valuable ancient statues and busts, such as the Apollo Belvedere, the Laocoon, the Sophocles, a gallery of more than two hundred reductions and models in terra

cotta and other materials; the statue of Nydia by Randolph Rogers; casts of modern statues, busts, etc., and reliefs; a number of engravings and photographic views, illustrating especially the architectural and sculptural remains of ancient Italy and Greece; a small collection of engraved copies of the great masterpieces of modern painting; two series of historical medallions—the HORACE WHITE COLLECTION, and the GOVERNOR BAGLEY COLLECTION—the former illustrative of ancient, mediæval, and modern European history, the latter designed to embrace the commemorative medals struck by order of Congress or other authorities, and now containing one hundred such medals; and a large collection of coins, chiefly Greek and Roman, presented to the University by the late Dr. A. E. Richards.

THE ROGERS GALLERY comprises the entire collection of the original casts of the works of the late Randolph Rogers, more than a hundred in number. It was given by that distinguished sculptor to the State of Michigan for the University museum.

The late Henry C. Lewis, of Coldwater, by his will bequeathed to the University his valuable collection of works of art comprising about six hundred and fifty paintings and forty pieces of statuary. This collection has recently come into the possession of the University. The statuary and somewhat less than half of the paintings have been placed in the art gallery, the remainder being stored until a more commodious room shall have been provided.

THE LABORATORIES.

In the several laboratories of the University opportunities are provided for practical instruction in physics, chemistry, geology, zoology, psychology, botany, engineering, histology, physiology, hygiene, pathology, anatomy, and dentistry. The laboratories used chiefly by students of engineering, of medicine, and of dentistry are described in the chapters devoted to the engineering, the medical, and the dental schools.

PHYSICAL LABORATORY.

The basement of the physical laboratory has a German rock-asphaltum floor, with heavy stone-capped piers in every work room, and is devoted entirely to experimental work in electricity and magnetism. The engine room contains a 10'' by 14'' Russell horizontal engine with countershaft and friction clutch, an Edison shunt-wound dynamo of 5,000 watts capacity, a Sperry and a Brush 10-arc-light machine, with lamps for both, a Gramme machine of 5,000 watts made in 1877, a Fort Wayne 300-light alternator, with converters and all the appliances for a complete alternating plant, a Fisher 225-light constant-potential machine.

and a floating dynamometer. In an adjacent room are placed electro-dynamometers, ammeters, voltmeters, a wall resistance of iron wire constructed to absorb about 35 H-P of electrical energy, and a bank of 225 incandescent lamps. The photometric room, with blackened walls, and lighted only artificially, is also adjacent to the engine room.

A battery room, well ventilated and lighted, and supplied with water, contains a large storage battery. Five smaller work rooms are fitted with the usual appliances for electrical measurements.

On the first floor are a commodious lecture room, an apparatus room, a general laboratory for elementary work, a balance room, a mercury room, and two rooms for a private laboratory.

The laboratory is supplied with the most modern apparatus from the best American and European makers. In sound, it includes tuning forks and resonators from Koenig of Paris; in light, a spectrometer with 12-inch divided circle, an ophthalmo-spectroscope from the Geneva Society, an optical bench, with accessories, from Duboscq, a Zeiss focometer, a Zeiss spectrometer, and a polarimeter from Schmidt and Haensch; in electricity, galvanometers and resistance boxes, up to 250,000 units, from Edelmann, Hartmann & Braun, Elliott Brothers, Nalder Brothers & Co., and Queen & Co., besides condensers, voltmeters, and ammeters; also Lord Kelvin's graded galvanometers, a centi-ampere, a deci-ampere, and a deka-ampere balance made by White, of Glasgow. Among the standards are standard cells, a standard 100-ohm, a 10-ohm, and three 1-ohm coils, two standard condensers, and Ayrton and Perry's standard of self-induction, with a secohmmeter by Nalder Brothers.

The work in the laboratory is entirely quantitative in character, but provision has been made for illustrating the general principles of physics in the lecture courses.

CHEMICAL LABORATORIES.

The chemical laboratories provide for classes in general, analytical, organic, and physical chemistry, in pharmacy, in chemical technology, and in metallurgical assaying. Opportunities are given for original research in the several branches of chemical science and for independent investigations. In the course of the year, classes are formed in thirty-eight distinct courses of study. In the greater number of these courses the method of work combines training in laboratory operations with study for recitations and instruction by lectures,—the three requirements being united in one course.

The chemical building contains in all about 37,000 square feet of floor space. Besides the rooms for recitations, storage, administration, etc., the laboratories for students have an area of about 25,000 square feet.

The laboratory of general chemistry is separately organized. Courses in elementary inorganic chemistry, as well as in physical chemistry and

the advanced branches of the science are offered; research work both in inorganic and in organic general chemistry is also arranged for a limited number of students, and is carried on in a separate room. Modern apparatus is on hand for all the varieties of work that are liable to be undertaken, and a well-equipped balance room is provided.

The laboratories of analytical chemistry, organic chemistry, pharmacy, and chemical technology, are carried on together. There are separate work rooms for qualitative analysis, quantitative analysis, iron and steel analysis, electrolytic work, pharmaceutical preparations, organic preparations, organic analysis, medical chemistry, and assaying of ores,—as well as rooms for the weighing-balances and instruments of precision, for gas analysis, and for optical work. There are separate rooms for original research. The building contains two lecture rooms, two recitation rooms, and a museum with collections for instruction in chemistry, pharmacy, pharmacognosy, and chemical technology. In the ventilation of the work rooms the supply of fresh air is enforced by driving fans, and the removal of foul air is effected by strong draught flues, with which, also, work-hoods are connected.

The chemical laboratories are open throughout the college year to all students of the University, and are regularly used by all departments except the Department of Law. They are also open to any person who wishes to pursue special studies therein, providing he complies with the conditions for admission to that department of the University to which the desired special studies properly belong.

Three hundred and eighty students are engaged in these laboratories at the same time, each at a table provided for one worker. During the year, from 600 to 800 students complete from one to four courses of study each in the various branches of chemistry. The students engage in chemical work as it is needful for their different purposes,—the pursuit of science, or the preparation for teaching, for the several professions applying chemistry, and for the various chemical arts and industries.

The chemical library contains complete sets of all the most important chemical journals of present and former times, as well as the standard manuals, dictionaries, and encyclopedias. It thoroughly provides for all kinds of chemical work.

GEOLOGICAL LABORATORY.

Opportunity for practical work in geology is provided in rooms set apart for this use in the museum building. The rooms are furnished with microscopes, photographic instruments, cutting and polishing lathes, and other apparatus for the preparation of specimens. Special encouragement and assistance are given to students wishing to carry on original investigations.

BOTANICAL LABORATORY.

In the botanical laboratory instruction is given in the practical study of the structure, development, and physiology of plants, and opportunity is offered for investigation in cellular biology, in embryology and development, in some provinces of physiology, and in pathology.

The laboratory is provided with microscopes, microtomes, means for embedding, stains, reagents, aquaria, Wardian cases, klinostat, auxanometer, self-registering apparatus, sterilizers, and facilities for making pure cultures of algæ and fungi. There is a good working library in the laboratory containing, besides many monographs, the leading French, German, and English periodicals.

Students in the more elementary courses have constant personal assistance and direction from the instructors; the advanced courses require more independent work. Every facility within the means at command will be provided for those capable of doing work in research.

ZOOLOGICAL LABORATORY.

The zoological laboratory comprises nine rooms, with about 4,000 square feet of floor space, and is lighted by twenty-nine windows. There is a large room for the elementary work of students, and a smaller room for more advanced work in vertebrate morphology. These two rooms accommodate about fifty students at one time. There is a room for the housing of small mammals, a room for the storage of alcoholic material, and a room in which a reference library is shelved. The professor in charge has a private room; and four smaller rooms, each accommodating one or two persons, are used by the instructors and by students engaged in investigation. These rooms are provided with water and gas, and are fitted with tables specially designed for the work. There are also rooms set apart in the museum building for the use of persons engaged in the study of museum material.

Suitable provision has been made for the study of animals inhabiting the neighboring waters. There are four aquaria (the largest seven feet long), and there are arrangements for maintaining thirty smaller aquaria for the rearing of embryos and the study of isolated forms.

There is good equipment of microscopes, including a Zeiss microscope with apochromatic lenses, and of microtomes and accessory apparatus. For illustrative purposes, there is a collection of alcoholic specimens (many of them from the Naples Zoological Station), a set of Leuckart and Nitsche's wall charts and of Ziegler's wax models, and a small collection of Blaschka's glass models.

PSYCHOLOGICAL LABORATORY.

The psychological laboratory consists of two rooms, one 30 by 20 feet, with a 500-volt motor running the color mixer and kymograph, and one

9 by 20 feet containing the Hipps chronoscope, large Auzoux models of the brain and sense-organs, and instruments for optical, acoustical, temperature, and tactile experiments. The equipment includes instruments for the study of the time-sense, sense of position, attention, memory, association, æsthetics, and the motor effect of ideas and the emotions. There is also a supply of material necessary for all ordinary psychological experiments. The equipment is increased from time to time as the character of the investigation demands.

The work is of two kinds: (1) demonstration courses intended to give a general knowledge of the experimental methods, and of their relation to the more theoretical aspects of psychology; (2) courses in original research in which advanced students are expected to pursue lines of work for a more or less extended period in some one field of experiment. It is the aim of the laboratory to furnish every possible facility for such research work by competent students.

THE HOSPITALS.

There are two hospitals connected with the University, and they afford ample facilities for clinical instruction. One of the two is under the direction of the Faculty of the Department of Medicine and Surgery; the other is in charge of the Faculty of the Homœopathic Medical College. Further information in regard to the hospitals is given in connection with the descriptions of the medical schools.

AIDS TO MORAL AND RELIGIOUS CULTURE.

Vesper services are held Tuesday and Thursday afternoons in University Hall, open to all members of the University and to the public.

The Students' Christian Association, which has a large membership, holds stated meetings for religious and for social improvement. Through the enterprising efforts of the Association and the benevolence of those interested in its aims, a spacious and beautiful building, called Newberry Hall, has been erected for its use adjacent to the University Campus.

The churches of the city of Ann Arbor are cordially thrown open to the students, whose interests are largely consulted by the pastors in their pulpit instruction and in their plans of work. There are churches of the following communions in the city: Baptist, Congregationalist, the Disciples, German Lutheran, German Methodist, Methodist Episcopal, Presbyterian, Protestant Episcopal, Roman Catholic, and Unitarian.

Guilds, and other societies, consisting chiefly of students, have been organized in several of the churches both for religious and moral culture

and for social entertainment. The Hobart Guild, connected with St. Andrew's Church (Protestant Episcopal), has a commodious building, called Harris Hall (formerly known as Hobart Hall), planned and equipped for all the objects of the Guild; and two of the several lectureships contemplated in its plans have been endowed, the Baldwin Lectures for the Establishment and Defence of Christian Truth, and the Charlotte Wood Slocum Lectureship on Christian Evidences. The Tappan Presbyterian Association now occupies its new building, known as McMillan Hall; it owns a theological library of several thousand volumes, and maintains annual courses of lectures upon church history and church work. The Methodist Episcopal church has organized the Wesleyan Guild, and has made the beginning of a permanent fund for the support of a special lectureship. Unity Club is a society formed by the Unitarian church with similar purposes. The Foley Guild is an organization of Roman Catholic students under the patronage of the Rt. Reverend John S. Foley, bishop of the diocese. The society organized in connection with the Church of the Disciples is called the Inland League.

FACILITIES FOR PHYSICAL CULTURE.

The Waterman Gymnasium.—The University is now provided with an excellent gymnasium which has cost about \$65,000. Of this sum \$20,000 was given by the late Joshua W. Waterman, of Detroit, in honor of whom the building is named, about \$26,000 was raised by private subscription, and \$6,000 was turned over by the trustees of a fund that has been accumulated in recent years through the efforts of students. The main floor, which is a rectangle with truncated corners and dimensions of 150 by 90 feet, is well supplied with the various kinds of apparatus usually found in the best modern gymnasiums. A number of smaller rooms are devoted to administration, fencing, boxing, and other special purposes, while the basement is given up to baths and lockers. The main hall is lighted in the daytime by means of a large skylight 60 feet above the floor, and in the evening by electricity. A gallery makes room for an elliptical running-track 375 feet in length.

In the conduct of the gymnasium the aim is not so much the development of a few gymnastic experts as the provision of wholesome physical exercise for the many. Thus far the work has been voluntary. The facilities of the building, including physical examinations and instruction, are free to all students, the only charge being a rental of \$2 a year for a locker. Pending the completion of a separate wing for women, the present gymnasium is reserved for their exclusive use during the forenoon hours of each day.

Supervision of Athletics.—A level field of ten acres, owned by the University and situated a few minutes walk southward from the campus, has been set apart and equipped especially for open-air sports. The campus itself still provides room for tennis-courts and also for a small practice-ground close by the gymnasium. The general supervision of athletic sports is vested in a committee of nine, consisting of five professors elected annually by the University Senate, and four students chosen by the Students' Athletic Association. The Board of Control thus constituted has charge of all matters involving the relation of athletic sports to the University; for example, the eligibility of players proposed for any University team, the arrangement of intercollegiate games, the granting of leaves of absence, the investigation of charges of misconduct on the part of players. The policy of the Board is to foster the spirit of honor and gentlemanliness in athletics, to suppress evil tendencies, and to see to it that play shall not encroach too much upon the claims of work. For the furtherance of these ends certain specific rules and regulations have been adopted, a copy of which can be had on application to the Steward of the University.

UNIVERSITY ORGANIZATIONS.

Lecture Association.—The Students' Lecture Association provides each year, at a low price for admission, an attractive series of lectures and musical entertainments.

Choral Union.—The Choral Union is an organization of students and others, for the study and practice of choral music under the direction of the Professor of Music in the University, and for the promotion of general musical culture. Under its auspices, and with the cooperation of the University Musical Society,* the following course of concerts is announced for the year 1895-96:

- I. Theodore Thomas's Chicago Orchestra.
- II. Song Recital: Madame Clementine de Vere-Sapio.
- III. Choral Union Concert: Oratorio of Elijah.
- IV. M. Achille Rivarde, violinist, and M. Aime Lachauume, pianist.

*The University Musical Society is a body corporate under the laws of the State of Michigan. It has no organic connection with the University, though its membership is restricted to past and present University officers and students. This Society has established the University School of Music in Ann Arbor, in which systematic instruction is given in vocal and instrumental music, such as the University cannot undertake to provide. A series of ten chamber concerts is included in its annual programme. Catalogues of the school can be had by applying to Professor A. A. Stanley.

V. Theodore Thomas's Chicago Orchestra.

VI, VII, VIII, IX, X. May Festival: A series of five concerts on three successive days in May.

The Columbian Exposition Organ, which has been purchased for the University and is to be known as the Frieze Memorial Organ, in memory of the late Professor Henry Simmons Frieze, will be used in this course of concerts. It is also used at the regular vesper services.

Oratorical Association.—The Oratorical Association was organized by students of the Department of Literature, Science, and the Arts, and of the Department of Law, under the guidance of the Professor of Elocution and Oratory, to foster an interest in oratory, and also to take part in the contests of the Northern Oratorical League, which includes student organizations in six leading western institutions. At the annual contest of the Association the student who takes the first rank receives the Chicago Alumni Medal and testimonial of seventy-five dollars, and the student who is awarded second honor receives fifty dollars. The two are designated to represent the University in the annual contest of the League. In addition to the above testimonials the league offers one hundred dollars and fifty dollars respectively to the students who are awarded the first and second honor in the contests of that organization. These contests are not open to any person who has received a bachelor's degree.

In 1895 the first and second honors of the Oratorical Association were awarded respectively to James Henry Mays* and Fred Lewis Ingraham.

The Chicago Alumni Medal and Testimonial.—The Chicago Alumni Association of the University of Michigan offers annually a bronze medal and a testimonial of seventy-five dollars for excellence in oratory. This medal, designed by Mr. Louis H. Sullivan, of Chicago, is to be given to the student who is awarded the first honor in the annual contest of the University Oratorical Association.

Other Organizations.—Several organizations of University officers and students are maintained for the reading of papers and the holding of conferences on topics of interest that do not fall within the scope of ordinary class-room work; and some of them also aim to secure each year speakers of prominence to give public addresses on subjects germane to the purpose of the organization.

The students in the Department of Law arrange annually for a celebration of Washington's birthday. The address in 1895 was given by Hon. John J. Lentz, of Columbus, Ohio.

*Also won first honor in the Northern Oratorical League.

RELATION OF STUDENTS TO THE CIVIL AUTHORITIES.

Students are temporary residents of the city, and, like all other residents, are amenable to the laws. If guilty of disorder or crime, they are liable to arrest, fine, and imprisonment. A rule of the University Senate provides that if a student is arrested, or is convicted by the civil authorities, he shall be cited to appear before the Faculty of the department in which he is matriculated, and shall be liable to suspension or expulsion.

FEEES AND EXPENSES.

Matriculation Fee.—Every student before entering any department of the University is required to pay a matriculation fee. This fee, which, for citizens of Michigan, is ten dollars, and for those who come from any other State or country, twenty-five dollars, is paid but once, and entitles the student to the privileges of permanent membership in the University.

Annual Fee.—In addition to the matriculation fee, every student has to pay an annual fee for incidental expenses. This fee is paid the first year of residence at the University, and every year of residence thereafter. Resident graduates are required to pay the same annual fee as undergraduates. After the present academic year, 1895-6, the annual fee in the several departments of the University will be as follows:

Department of Literature, Science, and the Arts: for Michigan students, thirty dollars; for all others, forty dollars.*

Department of Engineering: for Michigan students, thirty-five dollars; for all others, forty-five dollars.*

Department of Medicine and Surgery: for Michigan students, thirty-five dollars; for all others, forty-five dollars.

Department of Law: for Michigan students, thirty-five dollars; for all others, forty-five dollars.

School of Pharmacy: for Michigan students, thirty-five dollars; for all others, forty-five dollars.

Homœopathic Medical College: for Michigan students, thirty-five dollars; for all others, forty-five dollars.

College of Dental Surgery: for Michigan students, thirty-five dollars; for all others, forty-five dollars.

The matriculation fee and the annual fee must be paid at the beginning of the college year. A by-law of the Board of Regents provides

*An annual fee of ten dollars is required from all graduates who are granted the privilege of pursuing studies for an advanced degree *in absentia*.

that no student or graduate shall be allowed to enjoy the privileges of the University until he has paid all fees that are due.

Laboratory Expenses.—Students who pursue laboratory courses of study are required to pay for the materials and apparatus actually consumed by them. The deposits required in advance are different for the different courses, ranging from one to twenty dollars. The laboratory expenses of students will vary with their prudence and economy. Experience has shown that in the chemical laboratory the average expense for all courses is about one dollar and twenty cents a week.

Diploma Fee.—The fee for the diploma given on graduation is ten dollars, and the by-laws of the Board of Regents prescribe that no person shall be recommended for a degree until he has paid all dues, including the fee for diploma.

Other Expenses.—Students obtain board and lodging in private families for from three to five dollars a week. Clubs are also formed in which the cost of board is from one dollar and a half to two dollars and a half a week. Room rent varies from seventy-five cents to two dollars a week for each student. The annual expenses of students, including clothing and incidentals, are, on the average, about three hundred and seventy dollars. The University does not undertake to furnish manual labor to students; yet a few find opportunities in the city for remunerative labor.

There are no dormitories and no commons connected with the University. Students on arriving in Ann Arbor can obtain information in regard to rooms and board by calling at the Steward's office.

Department of Literature, Science, and the Arts.

THE Department of Literature, Science, and the Arts owes its name to a provision in the legislative act under which the University was organized in the year 1837. In this department the aim is to cover the broad field of general university study of the ancient and the modern languages and literatures, of history, philosophy, mathematics, science, and the liberal arts, as distinguished from the more special work of the professional schools in engineering, medicine, law, pharmacy, and dentistry. To this end it provides a large number of courses of instruction, from which the candidates for the several degrees offered may make selection. Provision is also made for students who wish to take special courses, or to pursue miscellaneous studies, without being candidates for a degree. The conditions on which such students are admitted are stated on page. 44.

The Graduate School established in connection with this department is under the direction of an Administrative Council, appointed from the Faculty of the department.

The professional courses in engineering, which, prior to the opening of the current year, were included in the work of this department, have been transferred to the recently established Department of Engineering.

The academic year extends from the first day of October to the Thursday following the last Wednesday in June.

ADMISSION OF UNDERGRADUATES IN 1896.

[For admission to advanced standing, see page 42.]

[For admission of students not candidates for a degree, see page 44.]

Applicants for admission must be at least sixteen years of age, and must present satisfactory evidence of good moral character. They must bring credentials from their last instructor, or from the last institution with which they have been connected.

Unless admitted on diploma from an approved school (see page 45), any student who desires to become a candidate for a degree must pass examinations in some one of the groups of subjects described below. Before entering upon the examination each applicant must present his credentials to the Dean of the Department at his office in University Hall.

The requirements for admission given immediately below are those in force for the year 1896. They are described in four divisions, according to the degree which the student desires to take.

In 1897 certain changes go into effect.* The requirements in that year, and thereafter, are given on page 51.

THE DEGREE OF BACHELOR OF ARTS.

In 1896, the subjects on which applicants for admission to the course leading to the degree of Bachelor of Arts will be examined are as follows:

English Language, Composition, and Rhetoric.—*Grammar.*—Selections for analysis and parsing will be set, arranged to test the applicant's knowledge of the leading facts of English Grammar. To meet this requirement, a review of the subject should be had during the last year of the preparatory course.

Composition and Rhetoric.—The purpose of the examination in composition is to test the applicant's ability to write good English. To this end he will be asked to write two essays of not less than two hundred words each, one upon a subject drawn from the books mentioned below, and the other upon a subject drawn from his experience or observation.

* The requirements announced for 1897 will be accepted in 1896, if the applicant is prepared to pass examinations upon them.

The language of these essays must be grammatical and clear. The spelling, punctuation, and capitalizing must be correct. The applicant must show ability to discriminate in the use of words and to construct well-organized sentences and paragraphs. A topical outline should accompany each essay.

As preparation for this requirement, sustained and regular practice in writing is earnestly recommended. The student should prepare numerous written exercises throughout the four years of the high school course, and a sufficient number of these exercises should be corrected by the teacher and revised by the student to secure the desired accuracy. The subjects upon which the student writes should not be drawn exclusively from literature; a considerable proportion of them should be taken from the student's every-day experience; and topics should be so distributed as to give proper training in the various types of discourse, namely, description, narrative, argument, and exposition. The student should be grounded in the essentials of rhetoric, but those principles should receive emphasis which are most likely to be of service to him in his practice in writing, such as the principles of sentential structure, paragraphing, and the outlining of the essay. The correction of stock specimens of bad English is not recommended and will form no part of the entrance requirement.

It is further recommended that the reading of English classics and the memorizing of notable passages, both in prose and poetry, should form a regular exercise throughout the whole preparatory period. This is all-important for the development of a correct taste in language and literature. These readings should be connected, in reasonable measure, with the lives and characters of the authors read and with the history of their times. A good knowledge of the chronological order and of the leading characteristics of the principal modern English writers should be aimed at. Care should be taken not to overload the text of these classics with a mass of irrelevant and petty learning. Many of the "school classics" now in use are over-edited.

The books, from which subjects for compositions will be chosen in the year named, are here given. The applicant should make himself familiar with the plot, incidents, and characters of each work. Equivalents will be accepted.

1896. Shakespeare's *A Midsummer Night's Dream*, or *The Merchant of Venice*; Defoe's *Journal of the Plague Year*; Scott's *Woodstock*; Longfellow's *Evangeline*; George Eliot's *Silas Marner*; Irving's *Tales of a Traveller*.

History.—Myers's General History (or, in its stead, Myers's History of Greece and Allen's History of Rome); and the History of the United States as far as the close of the Revolutionary War.

Mathematics.—*Algebra.*—Fundamental Rules, Fractions, Simple Equations, Involution and Evolution, the Calculus of Radicals, and Quadratic Equations, as given in Olney's Complete School Algebra, or an equivalent in other authors.

Geometry.—Beman and Smith's Plane and Solid Geometry, or an equivalent in other authors.

N. B.—It is very desirable that High Schools whose graduates are received on diploma arrange their courses so as to include a portion of both algebra and

geometry in their last preparatory year. Students who do not come from diploma schools should take a similar review if they expect to succeed in the study of mathematics in the University.

Physics.—An amount represented by Carhart and Chute's *Elements of Physics*. Laboratory work in physics is urgently advised, though not required; but students who have completed a course in laboratory practice, may expect to derive advantage from it if they take work in the physical laboratory in the University (see page 85).

Botany.—Practical exercises in the study of common plants, so conducted as to secure a familiar acquaintance with the essential facts of vegetable morphology, physiology, and relationship. The method pursued in Spalding's *Introduction to Botany* will indicate the kind of work desired.

The examination will include,—

a. Description of indigenous species, by which the applicant's knowledge of organography and his facility in the use of the descriptive language of the science are tested.

b. Classification, including particularly the recognition at sight of important natural orders and large groups, with a practical knowledge of their botanical characters.

c. An account of physiological adaptations. The student is expected to know, from personal observation, something of the relations of flowers and insects, the dissemination of seeds, protective arrangements, and related subjects.

The limited time usually given to botany in the preparatory schools, often with insufficient material, renders it specially desirable that all who expect to continue this subject in the University should give some additional time to it during the summer vacations, when plants are easily procured, and there is better opportunity for independent observation.

Latin.—*Grammar.*—A thorough preparation in the elements of Etymology, Syntax, and Prosody.

Prose Composition.—Applicants will be asked to translate into Latin a passage of connected English narrative, based upon some portion of the *Caesar* or *Cicero* read. As a text-book, Jones's, Collar's, or Daniell's is recommended.

Reading.—Four books of *Caesar's Gallic War*; six select orations of *Cicero*; and nine books of *Virgil's Æneid*. For books 7-9 of the *Æneid*, 1,500 lines of *Ovid* may be substituted. The books named may serve to indicate the amount and kind of text that may most profitably be made the basis of a thorough study in preparing for the work of the University. It should be remembered that the University desires *mastery of Latin*; the choice of selections studied is of secondary importance. Applicants for admission in Latin will be tested in the interpretation of passages of moderate difficulty outside the range of works commonly used in preparatory schools.

Four years of daily recitation should be given to the preparatory work

in Latin. Special care should be taken with the training in Prose Composition. It is hoped that many schools will continue, as heretofore, to prepare students in the whole of the *Æneid*, or an equivalent. Students entering with this preparation will receive a certain amount of credit toward graduation.

The Roman method of pronouncing Latin is used at the University.

Greek.—*Grammar.*—Goodwin's or Hadley's. The inflections must be thoroughly mastered.

Prose Composition.—Jones's Exercises, with special reference to the writing of Greek with the accents, and to the general principles of syntax. Woodruff's Greek Prose Composition is taken as an equivalent.

Reading.—Three books of Xenophon's *Anabasis*.

The so-called continental sound of the vowels and diphthongs, and pronunciation according to the written accents, are preferred. In preparation, Boise's *First Lessons in Greek*, or White's *Beginner's Greek Book*, will be found valuable.

Two full years of daily recitation ought to be given to preparation in Greek.

THE DEGREE OF BACHELOR OF PHILOSOPHY.

In 1896, applicants for admission to the course leading to the degree of Bachelor of Philosophy will be examined in all the subjects required for admission to the course leading to the degree of Bachelor of Arts (excepting what is required in Greek and in Grecian History), and also in French or in German, the same as required for the course leading to the degree of Bachelor of Science.

THE DEGREE OF BACHELOR OF SCIENCE.

In 1896, the subjects on which applicants for admission to the courses leading to the degree of Bachelor of Science will be examined are as follows:

English Language, Composition, Rhetoric, and Mathematics.

—In all, the same as for the degree of Bachelor of Arts (see pages 37, 38).

History.—Myers's *General History*, or an equivalent; and the *History of the United States* as far as the close of the Revolutionary War.

French, German, and Latin.—Applicants may offer either French and German, French and Latin, or German and Latin, two of these three languages being required. The requirements in each are as follows:

French.—The whole subject of French Grammar. The applicant will be expected to read at sight easy French, and to translate correctly into French simple English sentences. Two years ought to be given to this study, the first year being spent on the grammar, and the second devoted to reading good modern French, accompanied by grammatical analysis.

Admission of Undergraduates in 1896.

and exercise in writing. The texts read should be chosen from modern conversational prose; modern, rather than classical, narrative or descriptive.

German.—(1) Ability to pronounce German correctly, and to converse fluently with the proper intonations. (2) The student should be able to give every-day facts of the grammar, to be evidenced by translating English phrases and sentences into German. (3) The student should be able to read—say four hundred pages—so that he can understand and be able to construe at sight, and put into good English, prose, or moderately difficult German prose, either narrative or didactic, and the study of one classical drama, Schiller's Tell being recommended.

Latin.—Jones's First Latin Book, or an equivalent text-book; or other introductory text-book; four books of Cicero's *Orations*, or two of the orations of Cicero. It is expected that at least thirty minutes will be given to preparation in Latin.

Physics and Botany.—In both, the same as for the degree of Bachelor of Arts (see page 36).

Chemistry, Geology, Zoology, Physiology, Physical Geography, and Astronomy.—The applicant may enter any one of these subjects. The requirements, intended to cover a half-year's work in each subject, are as follows:

Chemistry.—Remsen's Briefer Course, or an equivalent.

Geology.—Winchell's Geological Studies.

Zoology.—Packard's Zoology, Briefer Course, or Webster's Manual of Zoology.

Physiology.—Martin's The Human Body, Briefer Course.

Physical Geography.—Hinman's Elements, Physical Geography, or an equivalent.

Astronomy.—Newcomb and Holden's Astronomy, Book I, or Young's Elements of Astronomy, or an equivalent. Four constellations, principal constellations is required.

THE DEGREE OF BACHELOR OF LETTERS.

In 1896, the subjects on which applicants for admission are required leading to the degree of Bachelor of Letters will be examined as follows:

English Language, Composition, and Rhetoric.—The same as for the degree of Bachelor of Arts (see page 36).

English Literature.—Daily recitations for at least one year will be requisite. Stopford A. Brooke's Primer, or any other manual, may be used for an outline of the subject. As much time as practicable should be given to the careful reading of representative authors in each period.

Mathematics, Physics, and Botany.—In all, the same as for the degree of Bachelor of Arts (see pages 36, 39).

Chemistry, Geology, Zoology, Physiology, Physical Geography, and Astronomy.—In any *three* of these subjects, the same as for the degree of Bachelor of Science (see page 41).

History.—Myers's General History, or an equivalent, Johnston's History of the United States, and Ransome's History of England.

Civil Government.—Fiske's Civil Government, Hinsdale's American Government (Parts I and II, especially the large print), or an equivalent.

French, German, or Latin.—In place of the English History and the three optional sciences specified above, the applicant for admission may present French, German, or Latin in amount equal to that exacted of applicants for admission to the course leading to the degree of Bachelor of Science (see page 40). This means about two years' study in some one of these three languages.

With respect to the option here allowed, it may be observed that inasmuch as a large part of the work required in the University for the degree of Bachelor of Letters consists of French and German, students who intend to take this degree will find it advantageous to begin at least one of these languages in their preparatory course.

ADMISSION TO ADVANCED STANDING.

1. A student who brings a certificate of standing from an approved college or university, showing that he has satisfactorily completed at least two years of the curriculum of the institution from which he comes, may be admitted without examination to equal standing in this department of the University.

2. A student who has completed at least one year's college work in an approved college, and who brings an explicit and official certificate describing his course of study and scholarship, and testifying to his good character, may be admitted to advanced standing without examination, except such as may be necessary to determine what credit he is to receive for work done in the college from which he comes. Students coming from colleges whose requirements for admission are substantially equivalent to those of this department of the University may thus expect to be able to go on with their work without loss of standing.

3. A student who has not completed a year's college work in an approved college, but who, previously to entering this department of the University, has pursued studies beyond those required for admission, may be admitted to advanced standing on passing examinations in the studies prescribed for admission to the course he wishes to pursue, and also in such undergraduate studies as he may ask to be credited with in advance. The examination for advanced standing, however, may be waived in the case of studies pursued in a graduate course by graduates of a diploma school, provided the work of such graduate course has been inspected and approved by the Faculty.

4. Rules relating to admission to advanced standing:

a. Credits must be secured before the fifteenth of December or (if the student be matriculated after that date) before the tenth of April.

b. No credit will be given for advanced standing after the dates named in (*a*).

c. An account once closed cannot be reopened without special permission of the Faculty.

d. All students who apply for advanced standing on the conditions stated in paragraphs (1) and (2) above, must present their credentials and certificates to the Dean of the Department.

e. All students, whether candidates for a degree or pursuing select studies, who apply for advanced standing on the conditions stated in paragraph (3), must present to the Registrar a statement showing the amount of work done in the subjects in which credit is asked.

f. The application for advanced standing should be made to the Registrar immediately after matriculation; and the Registrar will furnish a blank form for presentation to the professors in charge of the several subjects named in the blank.

g. No credit will be given in any subject for high school work unless the subject has been pursued in the high school for at least one year.

ADMISSION OF STUDENTS NOT CANDIDATES FOR A DEGREE.

Persons who desire to pursue studies in this department, and do not desire to become candidates for a degree, will be admitted on the following conditions:

1. All persons under twenty-one years of age must pass the entrance examinations required of candidates for some degree, as described on pages 37 to 42.

2. Persons over twenty-one years of age must show that they have a good knowledge of English and are otherwise prepared to pursue profitably the studies they may desire to take up.

3. Should a student who enters under the preceding provision (2) subsequently become a candidate for graduation, he must pass all the examinations for admission required of such a candidate, at least one year previous to the time when he proposes to graduate.

4. Students not candidates for a degree who wish credit for studies pursued before admission are referred to the rules relating to advanced standing given above.

TIMES OF EXAMINATIONS.

An examination for admission to the Department of Literature, Science, and the Arts, will be held on Saturday and Monday, June 20 and 22, 1896, and another beginning on Wednesday, September 23, and continuing through the Thursday, Friday, Saturday, and Monday following. The examinations will begin at nine o'clock A. M. of each day. Applicants may take their examinations at either of these times, or may take a part in June and a part in September. In either case it is particularly desired that they present themselves on the first day of the examination.

At the June examination the subjects for Saturday will

be: Mathematics, Greek, Latin, French, German, Botany, Zoology, Physiology, Astronomy, Physical Geography, Geology. For Monday: Latin Prose Composition, English Language, English Literature, History and Civil Government, Physics, Chemistry.

In September the examinations will be conducted in accordance with the following scheme:

	WEDNESDAY.		THURSDAY.		FRIDAY.		SATURDAY.		MONDAY.	
	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.
Mathematics.....	9 00	2 00	9 00	2 00	....	....	9 00	2 00	9 00	....
Greek.....	9 00	3 00	....	....	....	....	9 00	....
Latin*.....	9 00†	....	....	....	9 00	....	....	....
English Language ⁶⁰	4 00	....	4 00	....	4 00	....	....	....	4 00
English Literature*.....	2 00	....	....	....	3 00	....	....
History and Civil Government*.....	2 00	....	....	....	2 00
French.....	2 00	....	2 00	....	2 00	....	....
German.....	9 00	....	9 00	....	9 00	....	9 00	....	9 00	....
Botany*.....	9 00	....	....	....	....	....	9 00	....
Zoology.....	2 00
Physiology*.....	11 00	....
Geology.....	4 00	....	....
Astronomy.....	3 00
Physical Geography*.....	9 00	....	....	....
Physics*.....	11 00	....	9 00	....	....	....	....	4 00
Chemistry*.....	2 00	....	....

ADMISSION ON DIPLOMA.

The privilege of sending pupils for admission on diploma, originally limited to approved schools in Michigan, has been extended to include schools in other States.

On request of the school board in charge of any school, the Faculty will designate a committee to visit the school and report upon its condition. Usually the committee will consist of members of the Faculty; but whenever, owing to the great distance of a school from Ann Arbor, or for any other reason, this is impracticable, other persons may be designated to perform, under the direction of the Faculty, the work of inspection.

If the Faculty are satisfied from the report of their committee that the school is taught by competent instructors,

*Examination in writing.

†Consultation hour.

and is furnishing a good preparation to meet the requirements for admission of candidates for any one or more of our degrees, then the graduates from *the approved preparatory course or courses* will be admitted without further examination, and permitted to enter upon such undergraduate work as the preparatory studies contemplated.* They must present to the Dean of the Department, within a year and three months after their graduation, the diplomas of their school board. They must also present certificates from the school superintendent or principal, stating that they have sustained their examinations in all the studies prescribed for admission of candidates for some one of our degrees (see pages 37 to 42, and 50 to 57), and are recommended for admission to the University. They will be required to appear at once in their places; otherwise they can be admitted only upon examination.

The schools which shall be approved shall be entitled to send their graduates on diploma for a period of three years (inclusive of the year of visitation) without further inspection, provided that the Faculty are satisfied that within this period no important changes affecting the course of study and the efficiency of the instruction make another inspection necessary. Otherwise, the Faculty reserve the right to require another inspection if the relation between the school and the University is to be maintained. Should the authorities of any school at any time within this period desire that a committee of inspection visit their school, the Faculty will always grant such a request if practicable.

The superintendent of each approved school is expected to send to the President, annually, at a date not later in the year than March first, a catalogue of the school; or, if no catalogue is published, he is expected to send a statement, giving the names of the teachers, the number of pupils, and a description of the course of study.

*See paragraph on page 57 concerning the admission of graduates of an English course in 1897 and thereafter.

A circular giving fuller details on this subject can be obtained on application to the President.

The schools named below have been approved by the Faculty as qualified to prepare students for admission on diploma for the courses specified. The third column gives the year in which the term of approval expires. Unless otherwise indicated, the places named are in Michigan, and the school approved is the public high school of the locality. Schools that have been approved as qualified to prepare students for admission to the courses in Engineering alone are not included in this list. They may be found in the chapter on the Department of Engineering.

Adrian,	Ph.B., B.S., B.L.	1897
Albion,	B.S., B.L.	1897
Allegan,	Ph.B., B.S., B.L.	1896
Alpena,	Ph.B., B.S., B.L.	1895
Ann Arbor,	All Courses.	1895
Ann Arbor: St. Thomas Parochial School,	B.L.	1895
Ashburnham, Mass.: Cushing Academy,	All Courses.	1897
Aurora, Ill.: East Side,	Ph.B., B.S., B.L.	1895
West Side,	Ph.B., B.S., B.L.	1895
Austin, Ill.,	Ph.B., B.S., B.L.	1896
Battle Creek,	All Courses.	1895
Bay City,	All Courses.	1895
Belding,	Ph.B., B.S., B.L.	1895
Benton Harbor,	All Courses.	1897
Benton Harbor: Normal and Collegiate Institute,	All Courses.	1895
Big Rapids,	Ph.B., B.S., B.L.	1896
Birmingham,	Ph.B., B.S., B.L.	1896
Bloomington, Ill.,	All Courses.	1897
Buchanan,	Ph.B., B.S., B.L.	1895
Cadillac,	B.S., B.L.	1895
Calumet,	B.S., B.L.	1896
Caro,	Ph.B., B.S., B.L.	1896
Cassopolis,	Ph.B., B.S., B.L.	1895
Cedar Rapids, Ia.,	Ph.B., B.S., B.L.	1895
Champion,	B.S., B.L.	1896
Charlotte,	All Courses.	1895
Chicago, Ill.: North Division,	All Courses.	1895
Northwest Division,	Ph.B., B.S., B.L.	1896
South Division,	All Courses.	1896
West Division,	All Courses.	1896

Calumet,	All Courses.	1896
Englewood,	All Courses.	1896
Hyde Park,	All Courses.	1896
Jefferson High School,	All Courses.	1896
Lake,	All Courses.	1896
Lake View,	All Courses.	1896
South Chicago,	All Courses.	1896
Harvard School,	All Courses.	1895
Kenwood Institute,	All Courses.	1897
University School,	All Courses.	1895
Cincinnati, O. Hughes School,	All Courses.	1895
Woodward School,	All Courses.	1896
Cleveland, O.: Central High School,	All Courses.	1895
West High School	All Courses.	1895
Clinton, Ia.,	Ph.B., B.S., B.L.	1895
Coldwater,	All Courses.	1897
Constantine,	Ph.B., B.S., B.L.	1895
Corunna,	Ph.B., B.S., B.L.	1895
Decatur,	Ph.B., B.S., B.L.	1896
Decatur, Ill.,	All Courses.	1897
Denver, Col.,	All Courses.	1896
Detroit,	All Courses.	1895
Detroit: Detroit School for Boys,	All Courses.	1895
Dowagiac	Ph.B., B.S., B.L.	1896
Duluth, Minn.,	All Courses.	1896
Eaton Rapids,	Ph.B., B.S., B.L.	1896
Elgin, Ill.,	Ph.B., B.S., B.L.	1896
Escanaba,	B.S., B.L.	1896
Fenton,	Ph.B., B.S., B.L.	1897
Flint,	All Courses.	1897
Geneseo, Ill.,	Ph.B., B.S., B.L.	1895
Grand Haven,	Ph.B., B.S., B.L.	1896
Grand Rapids,	All Courses.	1895
Greenville,	Ph.B., B.S., B.L.	1896
Hancock,	B.S., B.L.	1896
Hastings,	Ph.B., B.S., B.L.	1895
Hillsdale,	B.S., B.L.	1896
Holly,	B.S., B.L.	1897
Houghton,	B.S., B.L.	1895
Howell,	All Courses.	1896
Hudson: West Side,	Ph.B., B.S., B.L.	1895
Ionia,	All Courses.	1895
Iron Mountain,	B.S., B.L.	1896

Ironwood,	B.S., B.L.	1895
Ishpeming,	Ph.B., B.S., B.L.	1896
Ithaca,	B.S., B.L.	1895
Jackson: East Side,	Ph.B., B.S., B.L.	1895
West Side,	All Courses.	1895
Joliet, Ill.,	All Courses.	1897
Jonesville,	B.S., B.L.	1895
Kalamazoo,	All Courses.	1897
Kalamazoo: Michigan Female Seminary,	Ph.B., B.L.	1897
Kankakee, Ill.,	B.L.	1896
Kansas City, Mo.,	All Courses.	1895
Kendallville, Ind.,	B.L.	1896
La Grange, Ill. (Lyons township),	All Courses.	1896
Lake Linden,	Ph.B., B.S., B.L.	1897
Lansing,	All Courses.	1896
Lapeer,	All Courses.	1897
La Porte, Ind.,	Ph.B., B.S., B.L.	1896
Ludington,	All Courses.	1895
Manistee,	All Courses.	1895
Mansfield, O.,	All Courses.	1897
Marine City,	Ph.B., B.S., B.L.	1895
Marinette, Wis.,	B.L.	1895
Marquette,	All Courses.	1897
Marshall,	All Courses.	1896
Mason,	Ph.B., B.S., B.L.	1895
Maywood, Ill.,	Ph.B., B.S., B.L.	1895
Menominee,	B.L.	1895
Michigan City, Ind.,	All Courses.	1895
Monroe,	All Courses.	1897
Mt. Clemens,	Ph.B., B.S., B.L.	1896
Muskegon,	All Courses.	1895
Negaunee,	Ph.B., B.S., B.L.	1896
Niles,	Ph.B., B.S., B.L.	1895
Normal, Ill.: Normal University Academic Department,	A.B., Ph.B.	1895
Norway,	B.L.	1896
Oak Park, Ill.,	All Courses.	1896
Oak Park, Ill.: Scoville Place School,	Ph.B., B.S., B.L.	1895
Omaha, Neb.,	All Courses.	1895
Orchard Lake: Michigan Military Acad.,	All Courses.	1895
Ottawa, Ill.,	All Courses.	1895
Owosso,	Ph.B., B.S., B.L.	1895
Oxford, O.: Oxford College,	All Courses.	1895

Paw Paw,	All Courses.	1895
Pennsburg, Pa.: Perkiomen Seminary,	All Courses.	1895
Peoria, Ill.,	All Courses.	1897
Petoskey, t	Ph.B., B.S., B.L.	1895
Plainwell	B.L.	1895
Pontiac,	All Courses.	1897
Port Huron,	All Courses.	1895
Portland,	Ph.B., B.S., B.L.	1896
Princeton, Ill.,	All Courses.	1895
Raisin Valley Seminary,	B.S., B.L.	1895
Rockford, Ill.,	All Courses.	1897
Romeo,	All Courses.	1896
Saginaw: East Side,	All Courses.	1896
West Side,	All Courses.	1897
St. Clair,	Ph.B., B.S., B.L.	1896
St. Johns,	Ph.B., B.S., B.L.	1896
St. Joseph,	Ph.B., B.S., B.L.	1895
St. Louis,	Ph.B., B.S., B.L.	1896
St. Paul, Minn.,	All Courses.	1895
Sault Ste. Marie,	B.S., B.L.	1896
Saxton's River, Vt.: Vermont Academy,	All Courses.	1895
Schoolcraft,	Ph.B., B.S., B.L.	1896
South Bend, Ind.,	Ph.B., B.S., B.L.	1895
Springfield, Ill.,	All Courses.	1895
Sturgis,	B.S., B.L.	1895
Tecumseh,	Ph.B., B.S., B.L.	1896
Three Rivers,	All Courses.	1897
Toledo, O.,	All Courses.	1895
Traverse City,	Ph.B., B.S., B.L.	1897
Union City,	Ph.B., B.S., B.L.	1895
Vassar,	B.L.	1895
Vicksburg,	B.S., B.L.	1895
Washington, D. C.,	All Courses	1896
West Bay City,	All Courses.	1897
West Des Moines, Ia.,	All Courses.	1895
Wyandotte,	B.L.	1895
Ypsilanti,	All Courses.	1895

Total, 152 Schools.

REQUIREMENTS FOR ADMISSION IN 1897, AND
THEREAFTER.

In 1897, and thereafter, the subjects required for admission to the courses leading to the degrees of Bachelor of Arts, Bachelor of Philosophy, Bachelor of Science, and Bachelor of Letters, will be as given below.

The requirements respecting age of applicant, the presentation of credentials, admission to advanced standing, admission of students not candidates for a degree, and admission on diploma, remain as given on pages 37 and 42 to 46.

THE DEGREE OF BACHELOR OF ARTS.

In 1897, and thereafter, the subjects on which applicants for admission to the course leading to the degree of Bachelor of Arts will be examined will be as follows:

English.—Grammar.—Selections for analysis and parsing will be set, arranged to test the applicant's knowledge of the leading facts of English Grammar. To meet this requirement, a review of the subject should be had during the last year of the preparatory course.

Composition and Rhetoric.—The purpose of the examination in composition is to test the applicant's ability to write good English. To this end he will be asked to write two essays of not less than two hundred words each, one upon a subject drawn from the books mentioned below, and the other upon a subject drawn from his experience or observation. The language of these essays must be grammatical and clear. The spelling, punctuation, and capitalizing must be correct. The applicant must show ability to discriminate in the use of words and to construct well-organized sentences and paragraphs. A topical outline should accompany each essay.

As preparation for this requirement, sustained and regular practice in writing is earnestly recommended. The student should prepare numerous written exercises throughout the four years of the high school course, and a sufficient number of these exercises should be corrected by the teacher and revised by the student to secure the desired accuracy. The subjects upon which the student writes should not be drawn exclusively from literature; a considerable proportion of them should be taken from the student's every-day experience; and topics should be so distributed as to give proper training in the various types of discourse, namely, description, narrative, argument, and exposition. The student should be grounded in the essentials of rhetoric, but those principles should receive emphasis which are most likely to be of service to him in his practice in writing, such as the principles of sentential structure, paragraphing, and the outlining of the essay. The correction of stock specimens of bad English is not recommended, and will form no part of the entrance requirement.

It is further recommended that the reading of English classics and the memorizing of notable passages, both in prose and poetry, should form a regular exercise throughout the whole preparatory period. This is all-important for the development of a correct taste in language and literature.

The books, from which subjects for compositions will be chosen in the years named, are here given. The applicant should make himself familiar with the plot, incidents, and characters of each work. Equivalents will be accepted.

1897. Shakespeare's *As You Like It*, or *The Merchant of Venice*; Defoe's *Journal of the Plague Year*; Scott's *Marmion*; Longfellow's *Evangeline*; George Eliot's *Silas Marner*; Irving's *Tales of a Traveller*.

1898. Milton's *Paradise Lost*, Books I and II; Pope's *Iliad*, Books I and XXII; Goldsmith's *The Vicar of Wakefield*; Southey's *Life of Nelson*; Lowell's *The Vision of Sir Launfal*; Hawthorne's *The House of Seven Gables*.

1899. Chaucer's *The Knight's Tale*, or Dryden's *Palamon and Arcite*; Milton's *Paradise Lost*, Books I and II; Pope's *Iliad*, Books I, VI, XXII, and XXIV; The Sir Roger de Coverley Papers in *The Spectator*; Goldsmith's *The Vicar of Wakefield*; Scott's *Ivanhoe*; De Quincey's *Revolt of the Tartars*; Cooper's *The Last of the Mohicans*; Lowell's *The Vision of Sir Launfal*; Hawthorne's *The House of Seven Gables*.

English Literary History.—In addition to the books just named, it is expected that several other English Classics will be read each year. These readings should be connected, in reasonable measure, with the lives and characters of the authors read and with the history of their times. A good knowledge of the chronological order and of the leading characteristics of the principal modern English writers should be aimed at. Care should be taken not to overload the text of these classics with a mass of irrelevant and petty learning. Many of the "school classics" now in use are over-edited.

History.—Myers's General History (or, in its stead, Myers's History of Greece and Allen's History of Rome).

Mathematics.—*Algebra.*—Fundamental Rules, Fractions, Simple Equations, Involution and Evolution, the Calculus of Radicals, and Quadratic Equations, as given in Olney's Complete School Algebra, or an equivalent in other authors.

Geometry.—Beman and Smith's Plane and Solid Geometry, or an equivalent in other authors.

N. B.—It is very desirable that High Schools whose graduates are received on diploma arrange their courses so as to include a portion of both algebra and geometry in their last preparatory year. Students who do not come from diploma schools, should take a similar review if they expect to succeed in the study of mathematics in the University.

Physics.—An amount represented by Carhart and Chute's Elements

of Physics. Laboratory work in physics is urgently advised, though not required; but students who have completed a course in laboratory practice, may expect to derive advantage from it if they take work in the physical laboratory in the University (see page 85). It is expected that a full year will be given to preparation in physics.

Botany.—Practical exercises in the study of common plants, so conducted as to secure a familiar acquaintance with the essential facts of vegetable morphology, physiology, and relationship. The method pursued in Spalding's Introduction to Botany will indicate the kind of work desired, and it is expected that a half year will be given to preparation in this subject.

The examination will include,—

a. Description of indigenous species, by which the applicant's knowledge of organography and his facility in the use of the descriptive language of the science are tested.

b. Classification, including particularly the recognition at sight of important natural orders and large groups, with a practical knowledge of their botanical characters.

c. An account of physiological adaptations. The student is expected to know, from personal observation, something of the relations of flowers and insects, the dissemination of seeds, protective arrangements, and related subjects.

The limited time usually given to botany in the preparatory schools, often with insufficient material, renders it specially desirable that all who expect to continue this subject in the University should give some additional time to it during the summer vacations, when plants are easily procured, and there is better opportunity for independent observation.

Latin.—*Grammar.*—A thorough preparation in the elements of Etymology, Syntax, and Prosody.

Prose Composition.—Applicants will be asked to translate into Latin a passage of connected English narrative, based upon some portion of the Caesar or Cicero read. As a text-book, Jones's, Collar's, or Daniell's is recommended.

Reading.—Four books of Caesar's Gallic War; six select orations of Cicero; and nine books of Virgil's *Æneid*. For books 7-9 of the *Æneid*, 1,500 lines of Ovid may be substituted. The books named may serve to indicate the amount and kind of text that may most profitably be made the basis of a thorough study in preparing for the work of the University. It should be remembered that the University desires *mastery of Latin*; the choice of selections studied is of secondary importance. Applicants for admission in Latin will be tested in the interpretation of passages of moderate difficulty outside the range of works commonly used in preparatory schools.

Four years of daily recitation should be given to the preparatory work in Latin. Special care should be taken with the training in Prose Com-

position. It is hoped that many schools will continue, as heretofore, to prepare students in the whole of the *Æneid*, or an equivalent. Students entering with this preparation will receive a certain amount of credit toward graduation.

The Roman method of pronouncing Latin is used at the University.

Greek.—*Grammar.*—Goodwin's or Hadley's. The inflections must be thoroughly mastered.

Prose Composition.—Jones's Exercises, with special reference to the writing of Greek with the accents, and to the general principles of syntax. Woodruff's Greek Prose Composition is taken as an equivalent.

Reading.—Three books of Xenophon's *Anabasis* and two books of Homer.

The so-called continental sound of the vowels and diphthongs, and pronunciation according to the written accents, are preferred. In preparation, Boise's *First Lessons in Greek*, or White's *Beginner's Greek Book*, will be found valuable.

Two full years of daily recitation ought to be given to preparation in Greek.

THE DEGREE OF BACHELOR OF PHILOSOPHY.

In 1897, and thereafter, the requirements for admission to the course leading to the degree of Bachelor of Philosophy will fall into three groups, depending upon whether students offer six years, four years, or two years of foreign-language work. It is intended in the near future to fix the minimum requirement in foreign language at four years, and the schools are urged to conform to this minimum as soon as possible.

GROUP I.

In Group I the subjects and the requirements are all the same as for admission to the course leading to the degree of Bachelor of Arts, as described above, with the exception that, in place of two years of Greek, two years of French or two years of German is substituted. The requirement in each of these two languages is as follows:

French.—The whole subject of French Grammar. The applicant will be expected to read at sight easy French, and to translate correctly into French simple English sentences. The first year ought to be spent chiefly on the grammar and easy reading; and the second devoted to reading good modern French, accompanied by grammatical analysis and exercises in writing. The texts read should be chiefly narrative and conversational prose; modern, rather than classic, dramas, should be read.

German.—(1) Ability to pronounce German correctly and to read it fluently with the proper intonations. (2) Thorough familiarity with the every-day facts of the grammar, to be evinced by putting illustrative

English phrases and sentences into German. (3) Sufficient miscellaneous prose reading—say four hundred pages—so that the applicant will be able to construe at sight, and put into good English, a passage of moderately difficult German prose, either narrative or dialogue. (4) A careful study of one classical drama, Schiller's Tell being recommended.

GROUP II.

Group II is similar to Group I, except in the foreign language requirement, and in the addition of a year of United States history and civil government and a year of chemistry as a compensation for the reduction in the amount of language required.

The requirements in **English**, in **Mathematics**, in **Physics**, and in **Botany**, are the same as for admission to the course leading to the degree of Bachelor of Arts, as described above (see page 51).

In **History** the requirement is the same as for the degree of Bachelor of Arts with the addition of one year's work in United States History and Civil Government. Johnston's History of the United States and Fiske's Civil Government or Hinsdale's American Government are recommended as text-books.

In **Chemistry** the requirement is intended to cover one year's work. As a text-book, Freer's Elementary Chemistry, or an equivalent amount of work in Rensen's Introduction to the Study of Chemistry, is recommended. In either case the text should be accompanied by laboratory work.

The requirement in **foreign language** may be satisfied by (1) four years of Latin; (2) four years of French; (3) four years of German; (4) two years of Latin with two years of French; (5) two years of Latin with two years of German; or (6) two years of French with two years of German. The requirements in the several cases are as follows:

Latin.—The *four-year requirement* is the same as the requirement in Latin for the degree of Bachelor of Arts (see page 53).

The *two-year requirement* comprises Jones's First Latin Book or an equivalent amount in some other introductory text-book; four books of Caesar's Gallic War; and one of the orations of Cicero.

French.—The *two-year requirement* is the same as the requirement in French in Group I, above.

The *four-year requirement* comprises the *two-year requirement*, together with additional matter as follows: The third and fourth years should be spent in acquiring as great a familiarity as possible with the literature, in further practice in composition, and, where practicable, in practice in conversation. Some of the plays of Corneille, Racine, and Molière, should be read; some of the more modern plays of Hugo, Musset, and Dumas; some specimens of the best prose in history, memoirs,

and essay; and some of the lyric poetry of this century. It is advised that the literature as a whole be studied in Saintsbury's or in Warren's Primer. The student ought also to be able to express himself in French grammatically and with ease on ordinary topics.

German.—The *two-year requirement* is the same as the requirement in German in Group I, above.

The *four-year requirement* comprises the *two-year requirement*, together with additional matter as follows: Five classical dramas to be selected from the works of Goethe, Schiller, and Lessing; Schiller's History of the Thirty Years' War, or an equivalent amount of other historical reading or of good modern fiction; and the whole of Harris's German Prose Composition, or some equivalent work.

GROUP III.

Group III is similar to Group II, except that a year of English history and a year of English literature are added as a compensation for the reduction in the amount of language required.

The requirements in **English**, in **Mathematics**, in **Physics**, and in **Botany**, are all the same as for admission to the course leading to the degree of Bachelor of Arts, as described above (see page 51).

In **Chemistry** the requirement is the same as in Group II, above.

In **History** the requirement is the same as in Group II, above, with the addition of one year's work in English History. Ransome's History of England, Oman's History of England, Gardiner's Students' History of England, and Green's Short History of the English People, are recommended as text-books.

In **English Literature** the requirement is intended to cover one year's work. Stopford A. Brooke's Primer, or any other manual, may be used for an outline of the subject. As much time as practicable should be given to the careful reading of representative authors in each period.

The requirement in **foreign language** may be satisfied by (1) two years of Latin; (2) two years of French; or (3) two years of German. A single year in each of two languages will not be accepted as an equivalent for two years in one language. The requirements in the several cases are as follows:

Latin.—The same as the *two-year requirement* in Latin in Group II, above.

French.—The same as the requirement in French in Group I, above.

German.—The same as the requirement in German in Group I, above.

THE DEGREE OF BACHELOR OF SCIENCE.

In 1897, and thereafter, the requirements for admission to the courses leading to the degree of Bachelor of Science, will fall into three groups,

identical in all respects with the three groups described under the degree of Bachelor of Philosophy (see page 54).

THE DEGREE OF BACHELOR OF LETTERS.

In 1897, and thereafter, the requirements for admission to the course leading to the degree of Bachelor of Letters will fall into three groups, identical in all respects with the three groups described above under the degree of Bachelor of Philosophy (see page 54).

In 1897, and thereafter, accredited graduates of the diploma schools in the English course and such other persons as shall pass an examination in all the studies described above in Group III, with the exception of the requirement in a foreign language, may be admitted as special students with the right to make up the additional requirement and become candidates for a degree in one of the regular courses.

COURSES OF INSTRUCTION.

The Courses of Instruction are subject to change from time to time. At the opening of each academic year, a special Announcement is issued, giving full information concerning the courses offered for the year, and the days, hours, and places of lecture, recitation, and laboratory work. From the courses offered in the various branches of learning, the student is allowed to make his choice, under regulations prescribed by the Faculty (see page 112).

The courses announced for the year 1895-96 are described below. The amount of credit towards graduation assigned to each course is indicated by the expressions *one hour, two hours, etc.*, an *hour of credit* being given for the satisfactory completion of work equivalent to one exercise a week during one semester. Lectures and recitations are usually one hour in length, but in laboratory work, drawing, and other practical exercises, a longer attendance is required in order to secure an hour of credit.

For convenience of reference a few courses are included that are not ordinarily open to undergraduates, and for some of these no hours of credit are given.

GREEK.*

All students except those who are admitted to advanced standing, are required to pursue Course 1 before passing on to the other courses. The Teachers' Seminary is open only to those who have completed Courses 1, 2, 3, 4, and either 5*a* or 5*b*, and two hours of elective work. Courses 13*a* and 13*b* are primarily for graduate students. Courses 6*a*, 6*b*, 7*a*, 8, 11, 14, 15, 16, and 17, are advanced electives for undergraduates, but may be taken with advantage by graduates.

FIRST SEMESTER.

1. Select Orations of Lysias; Xenophon's Symposium. Three sections. *Four hours.* Professor PATTENGILL and Dr. WAIT.
4. Demosthenes, De Corona; Studies in the Attic Orators. Two sections. *Four hours.* Professor PATTENGILL and Dr. WAIT.
- 6*a*. Teachers' Seminary. Lectures on Greek Grammar. *Two hours.* Professor D'OÖGE.
- 7*a*. Seminary in Tragedy. The Orestean Trilogy of Aeschylus. The reading will be accompanied by a discussion of the principles of Greek dramatic art, and by a study of the principles of textual criticism. *Three hours.* Professor D'OÖGE.
8. History of Greek Art from the Beginning to the Roman Period. Von Reber's History of Ancient Art and Collignon's Manual of Greek Archaeology will be made the basis of a more general study. *Three hours.* Professor D'OÖGE.
14. Thucydides, Books VII and VIII. Special topics of study in Athenian legal and political antiquities will be assigned. *Three hours.* Professor PATTENGILL.
15. Aristotle's Ethics, Books I, VI, X. This course is especially intended for students of Greek philosophy, and will be accompanied by discussions and essays on themes suggested by the text. *Two hours.* Professor D'OÖGE.

SECOND SEMESTER.

2. Homer, Odyssey. Secs. I and II, selections from Books I-XII. Sec. III, Books XII-XXIV. *Three hours.* Secs. I and II, Dr. WAIT. Sec. III, Professor PATTENGILL.
Sec. III is for students who have read one or more books of Homer in their preparatory course.

* **School of Classical Studies at Athens.**—This University, through the generosity of some of its friends, is a contributor to the support of the American School of Classical Studies at Athens. The School affords facilities for archaeological and classical investigation and study in Greece, and graduates of the Department of Literature, Science, and the Arts of this University are entitled to all its advantages without expense for tuition. Professor M. L. D'Ooge was director of the School for 1886-87.

3. History of Greek Literature. Two sections. *One hour.* Dr. WAIT.
5. Dramatic Poetry. This course may be elected as 5a or 5b.
 - 5a. Sophocles, Philoctetes; Aristophanes, Wasps. *Four hours.* Professor D'OOGÉ.
 - 5b. Euripides, Iphigenia in Tauris; Aristophanes, Wasps. *Four hours.* Professor PATTENGILL.
- 6b. Teachers' Seminary. Greek Prose Composition. *Two hours.* Professor D'OOGÉ.
10. Introductory Course in Plato. The Apology and The Georgias. *Two hours.* Professor D'OOGÉ.
11. The Greek Lyric Poets. Stadtmüller's Selections. *Three hours.* Professor PATTENGILL.
- 13a. Graduate Seminary. The Athenian Constitution of Aristotle. Special topics for investigation will be assigned. *Two hours.* Professor D'OOGÉ.
- 13b. Graduate Seminary. Introduction to Greek Epigraphy and Reading of Inscriptions. *Two hours.* Dr. WAIT.
16. Modern Greek. Selections from the best modern Greek writers. *Two hours.* Dr. WAIT.
17. Seminary in Euripides. *Two hours.* Professor PATTENGILL.

LATIN.

Courses 1 and 2 must precede all the rest.

In order to increase the range of work offered to advanced students, several of the courses in Latin are given in alternate years, new courses being introduced as opportunity is thus afforded.

Students who wish to obtain a Teacher's Diploma, with Latin as one of the subjects, will be expected to complete Courses 1 to 4 inclusive, and Courses 5 (or 7a), 9, 10, 11, 12, 14, 21, and 22.

Courses 1, 2, 3, 4, 5, and 6a are intended primarily for undergraduates; Courses 7a, 8a, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, and 22 are for graduates and undergraduates; Courses 23, 24, 25, 26, 27, 28, 29, and 30 are primarily for graduates, though undergraduates of exceptional ability are sometimes admitted to them by special permission.

FIRST SEMESTER.

1. Cicero, De Senectute. Latin Writing. Livy, Book I. Seven sections. *Three hours.* Assistant Professor DRAKE, Mr. MEADER, and Mr. REICHLE.
3. Horace, Selections from the Odes, Satires, and Epistles. Studies in Roman Antiquities. Four sections. *Four hours.* Professor ROLFE, Assistant Professor DRAKE, and Mr. MEADER.
5. The Letters of Pliny. Interpretation of Selected Letters, and lectures. *Three hours.* Professor ROLFE.

- [5a. The Letters of Cicero. Interpretation of Selected Letters, with study of the Latin epistolary style. *Three hours.* Professor ROLFE.
Course 5a is omitted in 1895-96.]
- [7. The Annals of Tacitus. Interpretation of selections, and lectures. *Three hours.* Assistant Professor DRAKE.
Course 7 is omitted in 1895-96.]
- 7a. The Agricola and Germania, with Selections from the Histories of Tacitus. *Three hours.* Assistant Professor DRAKE.
- 7b. Rapid Reading of Selections from Nepos, Phaedrus, and Martial. *Two hours.* Assistant Professor DRAKE.
- [9. Introduction to Classical Philology. Lectures. *Three hours.* Professor KELSEY.
In Course 9, a brief outline of the history and present conditions of classical studies is given, followed by an extended discussion of the methods employed in classical philology. Attention is also given to the bibliography of the subject.
Course 9 is omitted in 1895-96.]
11. Latin Writing. *Two hours.* Professor ROLFE.
Course 11 is introductory to Course 12. The principal aim is to secure correctness of expression and a feeling for idiom. The course may profitably be taken by students whose work in the Latin writing of Course 1 has been of a high grade.
- [13. Lucretius. Interpretation of the text, and lectures. *Three hours.* Professor KELSEY.
Course 13 is omitted in 1895-96.]
15. Seneca, Selections from the Dialogues and the Epistles. *Three hours.* Professor KELSEY.
- [17. Semina y in Latin Masterpieces. Study of selected masterpieces of Roman Literature. *Three hours.* Professor ROLFE.
Course 17 is omitted in 1895-96.]
21. Teachers' Seminary. Interpretation of Caesar's Gallic War, with studies in the syntax and military antiquities. *Three hours.* Professor KELSEY.
Course 21 is open only to those who receive special permission. The exercises are not open to visitors.
23. Reports on the Current Literature of Latin Philology. Open to graduate students and, without credit, to undergraduate members of the Teachers' Seminary. *Two hours.* Professors KELSEY and ROLFE, and Assistant Professor DRAKE.
25. Seminary. Critical study of select portions of Seneca's philosophical works. *Two hours.* Professor KELSEY.
Course 25 is open to graduate students only.

27. Study of Roman Coins. Professor KELSEY.
Course 27 is open to graduate students only.
29. Latin Grammar. Lectures. *Three hours.* Professor ROLFE.

SECOND SEMESTER.

2. Livy, continued. Selections from Catullus. Two plays from Plautus or Terence. Cicero, *De Amicitia*. Seven sections. *Four hours.* Mr. MEADER and Mr. REICHLER.
4. Roman Literature. Selections from representative authors. Four sections. *Four hours.* Professor ROLFE, Assistant Professor DRAKE, and Mr. MEADER.
- 6a. Roman Satire. Selections from Juvenal and Persius. *Three hours.* Assistant Professor DRAKE.
- 8a. The Institutes of Gaius and Justinian. Interpretation of the text; with special study of the technical terms of the Roman Law. *Two hours.* Mr. MEADER.
10. Introduction to Roman Archæology. Elements of Roman archæology; topography and architectural history of Rome; sculpture and painting in the Roman period. Lectures. *Four hours.* Professor KELSEY.
12. Latin Writing. Advanced course. Two sections. *Two hours.* Professor ROLFE.
In Course 12, attention is given not only to correctness of expression, but also to matters of style and the finer distinctions of the language. It is limited to those whose work in Course 11 has been of a very high grade.
- [14. Latin Grammar. Lectures. *Four hours.* Professor ROLFE.
Course 14 is omitted in 1895-96. Course 29 may be taken as an equivalent.]
- [16. Latin Inscriptions. Reading of inscriptions of different periods from squeezes and fac-similes. Interpretation of inscriptions with special reference to the study of Roman life and society. *Three hours.* Professor KELSEY.
Course 16 is omitted in 1895-96.]
- [18. Ovid, *Fasti*. Studies in Roman topography and mythology. *Three hours.* Professor ROLFE.
Course 18 is omitted in 1895-96.]
20. Historical Proseminary. Study of historical subjects from the sources. Period of the Early Empire. *Two hours.* Assistant Professor DRAKE.
22. Teachers' Seminary. Study of Virgil. *Three hours.* Professor KELSEY.

24. Reports on the Current Literature of Latin Philology. Continuation of Course 23. *Two hours.* Professors KELSEY and ROLFE, and Assistant Professor DRAKE.
26. Seminary. Critical study of Seneca. Continuation of Course 25. *Two hours.* Professor KELSEY.
Course 26 is open to graduate students only.
28. Study of Roman Coins. Professor KELSEY.
Course 28 is open to graduate students only.
30. The Italic Dialects. Continuation of Course 29. *Three hours.* Professor ROLFE.

SANSKRIT

Before beginning the study of Sanskrit, the student should have pursued courses in Greek and Latin for at least four semesters or, instead of either Greek or Latin, Germanics of the early period.

FIRST SEMESTER.

1. Beginners' Course. Grammar, exercises in translation and composition. Text-books: Perry's Sanskrit Primer and Whitney's Sanskrit Grammar. *Three hours.* Dr. WAIT.

SECOND SEMESTER.

2. Interpretation of the prose selections contained in Lanman's Sanskrit Reader, with elementary studies in the comparative morphology of the more important cognate languages. *Three hours.* Dr. WAIT.

HELLENISTIC GREEK.

FIRST SEMESTER.

1. New Testament: Epistle to the Romans; I Corinthians; The Athenian Fragment of the Gospel of Peter discovered in 1887. Text-books: Westcott and Hort's Greek New Testament, revised American edition with introduction by Ph. Schaff; Thayer's Winer's New Testament Grammar; Thayer's Greek-English Lexicon; Bruchstücke des Evangeliums und der Apokalypse des Petrus, von Adolph Harnack, zweite Ausgabe. *Two hours.* Professor CRAIG.

SECOND SEMESTER.

2. Old Testament and Josephus: Selections from the Prophets; Josephus:—To Epaphroditus "Against Apion," the *πρὸς τοὺς Ἕλληνας* of Porphyry, the *περὶ τῆς τῶν Ἰουδαίων ἀρχαῖότητος* of Eusebius, circa 95 A. D. Text-books: Vetus Testamentum Graece by L. Van Ess, or The Old Testament in Greek by H. B. Swete, Vols. I-III; Grammar and Lexicon as in Course 1. *Two hours.* Professor CRAIG.

HEBREW.

FIRST SEMESTER.

1. Genesis. Baer and Delitzsch's Text. Harper's Elements of Grammar; Craig's Hebrew Word Manual. *Three hours.* Professor CRAIG.
3. Prophetic Literature: Hosea and Jeremiah. Study of the nature and content of prophecy in its literary, historical, and ethical aspects. Text-books: Hebrew Bible, Driver's Hebrew Moods and Tenses. *Two hours.* Professor CRAIG.

SECOND SEMESTER.

2. Deuteronomy, Joshua, I Samuel, Ruth, Jonah. Theile's Biblia Hebraica, Davies's Lexicon. *Three hours.* Professor CRAIG.
4. The Book of Job, including study of the literary structure, critique of the dominant ideas, and comparison with passages from Homer, Milton, Shakespeare, and Goethe's Faust. Text-book: Baer and Delitzsch's Text. *Two hours.* Professor CRAIG.

ASSYRIAN.

FIRST SEMESTER.

1. Introduction to Easy Historical Inscriptions from the Ninth Century, B. C., with study of the Grammar. Text-book: Delitzsch's Assyrische Lesestücke, dritte Auflage. *Three hours.* Professor CRAIG.
3. The Inscriptions of Nabonidus (555-538 B. C.), I. R., 69, V. R., 64, etc.; Inscription of Cyrus, V. R., 35; the East India Inscription of Nebuchadnezzar (604-561 B. C.) in archaic characters, I. R., 53-58, 641 lines. *Two hours.* Professor CRAIG.
5. Semitic Archæology and History. *Two hours.* Professor CRAIG.

SECOND SEMESTER.

2. Translation of the Inscriptions of Sargon II and Assurbanipal. *Two hours.* Professor CRAIG.
4. Ancient Babylonian Hymns (circa 2000 B. C.), IV. R. Text-books: Cuneiform Inscriptions of Western Asia, Vols. I, IV, and V (the abbreviations I. R., etc., above, refer to this work); Delitzsch's Assyrian Grammar (either German or English). *Two hours.* Professor CRAIG.

ARABIC.

SECOND SEMESTER.

1. Introductory Course. Grammar and reading. Text-book: Socin's Arabic Grammar, sixty pages of text and a glossary (German or English edition). *One hour.* Professor CRAIG.

FRENCH.

Courses 1 through 12 are open to all students. Students who are not qualified to take these courses in French beyond Courses 3 and 4 are allowed to take the other courses open to them. Courses 13, 15, 16, and 22 require a high degree of proficiency in pronunciation.

FIRST SEMESTER.

1. *First Course. Grammar and easy reading. Seven sections. Two hours. Mr. LEVI, Mr. ELDEN, Mr. BRANTON, and Mr. FRANÇOIS.*
2. *Reading and Translation from English and French. Three hours. Mr. FRANÇOIS.*
3. *Course 3 is intended for students who want a practical knowledge of the language. It is required of all who intend to take a University Diploma in French.*
4. *French Prose Writing of the Nineteenth Century. Sainte Beuve; Renan; Flaubert. Two sections. Two hours. Professor WALTER and Mr. LEVI.*
5. *French Classic Dramas. Three sections. Three hours. Mr. LEVI, Mr. ELDEN, and Mr. BRANTON.*
6. *Prose and Poetry of the Nineteenth Century. Two hours. Assistant Professor DE PONT.*
7. *Course 7 is open only to students who have taken Course 13, or who receive special permission.*
8. *La Fontaine's and Florian's Fables. Advanced practice in composition and conversation. Comparative study and analysis of the authors. Three hours. Assistant Professor DE PONT.*
9. *Course 12 must be preceded by Courses 5 and 16, and by a three-hour course in reading.*
10. *Seminary. Two hours. Professor WALTER.*
11. *Course 14 is open only to those who receive special permission.*
12. *Conversational Drill. Two hours. Assistant Professor DE PONT.*
13. *Study of Old French. Two hours. Mr. LEVI.*
14. *Modern French Prose, Musset; Mérimée; Sand. Two sections. Two hours. Mr. ELDEN and Mr. FRANÇOIS.*
15. *Dramatists of the Eighteenth Century, from the Classical to the Romantic Schools. Regnard; Marivaux; Destouches; etc. Three hours. Assistant Professor DE PONT.*
16. *Course 22 is open to students who have had Course 8 and a three-hour course in addition.*
17. *French Literature of the Sixteenth Century. Lectures, recitations, and essays. Two hours. Professor WALTER.*
18. *Course 24 is open to students who have had Course 9, and to others who receive special permission.*

26. French Philosophical Writers. Descartes; Malebranche; Condillac.
One hour. Professor WALTER.
Course 26 is open only to those who receive special permission.
- SECOND SEMESTER.
2. Modern Prose and Plays. Grammar continued. Six sections
Four hours. Mr. LEVI, Mr. ELDEN, Mr. BRANDON, and Mr. FRANÇOIS.
4. Scientific Reading. *La Nature.* *Four hours.* Assistant Professor DE PONT.
In Course 4 the class is limited to thirty. Preference is given to B. S. students, for whom the course is prescribed. Other students, if qualified, are admitted in the order of their application.
5. Advanced Composition. Continuation of Course 3; intended as preparatory to seminary work. *Three hours.* Assistant Professor DE PONT.
7. Classic French Prose. Pascal; Bossuet; La Bruyère; Sévigné. Three sections. *Two hours.* Mr. LEVI and Mr. ELDEN.
9. Montaigne. *Two hours.* Professor WALTER.
Course 9 is open to all candidates for the degree of A. B. who have had ten hours of French, and to others who receive special permission.
11. Prose Writers of the Eighteenth Century. Sec. I, Rousseau, Contrat Social and Selections. Sec. II, Voltaire; Montesquieu; Diderot. *Three hours.* Sec. I, Professor WALTER. Sec. II, Mr. FRANÇOIS.
Course 11 is open only to those who receive special permission.
13. French Lyrics. *La Lyre Française.* *Three hours.* Assistant Professor DE PONT.
Course 13 is open to students who have had fourteen hours of French.
15. Seminary. Victor Hugo, Dramas. *Two hours.* Assistant Professor DE PONT.
Course 15 is conducted in French, and is open only to students who have had Course 12 or its equivalent.
17. Teachers' Course. *Two hours.* Professor WALTER.
Course 17 is open only to those who receive special permission, and they must have completed Course 3 or its equivalent.
21. Contemporary French Drama. *Two hours.* Mr. BRANDON.
23. Study of Old French. *Two hours.* Mr. LEVI.
25. French Literature of the Seventeenth Century. *Two hours.* Mr. LEVI.
27. Didactic, Narrative, and Satirical Poetry. Regnier; Boileau; Voltaire. *Two hours.* Mr. ELDEN.

FRENCH.

Courses 1 and 2 must precede all others. Students who are required to take eight hours in French beyond Courses 1 and 2, are allowed to select from the courses open to them. Courses 10, 13, 17, and 22 require a good degree of proficiency in pronunciation.

FIRST SEMESTER.

1. Beginners' Course. Grammar and easy reading. Seven sections. *Four hours.* Mr. LEVI, Mr. ELDEN, Mr. BRANDON, and Mr. FRANÇOIS.
3. Composition and Translation from English into French. *Three hours.* Mr. FRANÇOIS.
Course 3 is intended for students who want a practical knowledge of the language; it is required of all who intend to take a Teacher's Diploma in French.
6. Critical Prose Writing of the Nineteenth Century. Sainte Beuve; Brunetière; Taine. Two sections. *Two hours.* Professor WALTER and Mr. LEVI.
8. French Classic Dramas. Three sections. *Three hours.* Mr. LEVI, Mr. ELDEN, and Mr. BRANDON.
10. Poets and Poetry of the Nineteenth Century. *Two hours.* Assistant Professor DE PONT.
Course 10 is open only to students who have taken Course 13, or who receive special permission.
12. La Fontaine's and Florian's Fables. Advanced practice in composition and conversation. Comparative study and analysis of the authors. *Three hours.* Assistant Professor DE PONT.
Course 12 must be preceded by Courses 5 and 16, and by a three-hour course in reading.
14. Seminary. *Two hours.* Professor WALTER.
Course 14 is open only to those who receive special permission.
16. Conversational Drill. *Two hours.* Assistant Professor DE PONT.
18. Study of Old French. *Two hours.* Mr. LEVI.
20. Modern French Prose. Musset; Mérimée; Sand. Two sections. *Two hours.* Mr. ELDEN and Mr. FRANÇOIS.
22. Dramatists of the Eighteenth Century, from the Classical to the Romantic Schools. Regnard; Marivaux; Destouches; etc. *Three hours.* Assistant Professor DE PONT.
Course 22 is open to students who have had Course 8 and a three-hour course in addition.
24. French Literature of the Sixteenth Century. Lectures, recitations, and essays. *Two hours.* Professor WALTER.
Course 24 is open to students who have had Course 9, and to others who receive special permission.

3. Plays of Schiller, with collateral prose reading and practice in writing German. This course may be elected as 3*a*, 3*b*, etc.
 - 3*a*. Wilhelm Tell. Two sections. *Four hours*. Assistant Professor WINKLER and Dr. VOSS.
 - 3*b*. Jungfrau von Orleans. Two sections. *Four hours*. Assistant Professor WINKLER and Mr. MENSEL.
 - 3*c*. Maria Stuart. Two sections. *Four hours*. Mr. HILDNER and Mr. DIEKHOFF.
5. Third Year Electives. This course may be elected as 5*a*, 5*b*, etc.
 - 5*a*. The First Part of Goethe's Faust. Thomas's edition. *Three hours*. Assistant Professor WINKLER.
 - 5*b*. Lessing's Nathan der Weise, Anti Göze, and Erziehung des Menschengeschlechts. *Three hours*. Assistant Professor WINKLER.
 - 5*c*. Schiller's Wallenstein with extracts from his Geschichte des dreissigjährigen Kriegs. *Three hours*. Dr. VOSS.
 - 5*d*. Schönbach's Ueber Lesen und Bildung. *Two hours*. Mr. MENSEL.
 - 5*e*. Ten Brink's Fünf Vorlesungen über Shakespere. *Two hours*. Mr. HILDNER.
 - 5*f*. Scientific Prose. *Two hours*. Mr. HILDNER.
 - 5*g*. Advanced German Composition. Two sections. *Two hours*. Mr. MENSEL and Dr. VOSS.
7. Elementary Middle High German. Bachmann's Lesebuch and Paul's Grammatik. *Two hours*. Mr. MENSEL.
9. Modern German Grammar from a Historical and Comparative Point of View; I, Phonology and Morphology. *Three hours*. Professor HENCH.
11. History of German Literature. I, From the Earliest Times to the End of the Middle Ages. Lectures and readings from Max Müller's German Classics. *Three hours*. Professor HENCH.
- [13. Graduate Seminary. *Two hours*. Professor THOMAS.
Course 13 is intended primarily for graduates and is not open to students working on the credit system. It is omitted in 1895-96.]
15. Seminary in Old High German. Comparative study of Isidor and the Monsee Fragments. *Two hours*. Professor HENCH.
Course 15 is open to students who have had an elementary course in Old High German.
- [17. German Romanticism. Lectures and recitations. Assistant Professor WINKLER.
Course 17 is omitted in 1895-96.]

29. Contemporary Letter-Writers. Quinet; Sand; Doudan. *Two hours.*
Mr. ELDEN.

ITALIAN.

FIRST SEMESTER.

2. Continuation of Course 1. Ariosto or Tasso. *Two hours.* Mr. LEVI.
4. Dante, *La Vita Nuova*. *One hour.* Professor WALTER.
Course 4 must be preceded by Course 1.

SECOND SEMESTER.

1. Grandgent's Italian Grammar. Easy Prose. *Three hours.* Mr. LEVI.
Course 1 is open only to those who have completed Courses 1 and 2 in French.
3. Dante, *Divina Commedia*. Lectures and recitations. *Two hours.*
Professor WALTER.

SPANISH.

FIRST SEMESTER.

1. Manning's or Edgren's Spanish Grammar. Easy Prose. *Two hours.*
Mr. LEVI.
Course 1 is open only to those who have completed Courses 1 and 2 in French.
3. Calderon, *La Vida es Sueño*. *Two hours.* Professor WALTER.
Course 3 is open only to those who have taken Courses 1 and 2.

SECOND SEMESTER.

2. Continuation of Course 1. *Two hours.* Mr. LEVI.
4. Cervantes, *Don Quijote*. *One hour.* Professor WALTER.

GERMAN.

The required work in German is all included in Courses 1, 2, 3, 4, which should be taken in the order of the numerals. The student must take, for the elementary requirement of eight hours, Courses 1 and 2; for the advanced requirement of eight hours, one of the options designated 3a, 3b, etc., and one of the options designated 4a, 4b. The numbers above 4 designate advanced electives which can be taken only by special permission.

FIRST SEMESTER.

1. Beginners' Course. Thomas's German Grammar and a German Reader. Six sections. *Four hours.* Mr. MENSEL, Mr. HILDER, Dr. VOSS, and Mr. ROEDDER.

3. Plays of Schiller, with collateral prose reading and practice in writing German. This course may be elected as 3*a*, 3*b*, etc.
 - 3*a*. Wilhelm Tell. Two sections. *Four hours*. Assistant Professor WINKLER and Dr. VOSS.
 - 3*b*. Jungfrau von Orleans. Two sections. *Four hours*. Assistant Professor WINKLER and Mr. MENSEL.
 - 3*c*. Maria Stuart. Two sections. *Four hours*. Mr. HILDNER and Mr. DIEKHOF.
5. Third Year Electives. This course may be elected as 5*a*, 5*b*, etc.
 - 5*a*. The First Part of Goethe's Faust. Thomas's edition. *Three hours*. Assistant Professor WINKLER.
 - 5*b*. Lessing's Nathan der Weise, Anti Göze, and Erziehung des Menschengeschlechts. *Three hours*. Assistant Professor WINKLER.
 - 5*c*. Schiller's Wallenstein with extracts from his Geschichte des dreissigjährigen Kriegs. *Three hours*. Dr. VOSS.
 - 5*d*. Schönbach's Ueber Lesen und Bildung. *Two hours*. Mr. MENSEL.
 - 5*e*. Ten Brink's Fünf Vorlesungen über Shakespere. *Two hours*. Mr. HILDNER.
 - 5*f*. Scientific Prose. *Two hours*. Mr. HILDNER.
 - 5*g*. Advanced German Composition. Two sections. *Two hours*. Mr. MENSEL and Dr. VOSS.
7. Elementary Middle High German. Bachmann's Lesebuch and Paul's Grammatik. *Two hours*. Mr. MENSEL.
9. Modern German Grammar from a Historical and Comparative Point of View; I, Phonology and Morphology. *Three hours*. Professor HENCH.
11. History of German Literature. I, From the Earliest Times to the End of the Middle Ages. Lectures and readings from Max Müller's German Classics. *Three hours*. Professor HENCH.
- [13. Graduate Seminary. *Two hours*. Professor THOMAS.
Course 13 is intended primarily for graduates and is not open to students working on the credit system. It is omitted in 1895-96.]
15. Seminary in Old High German. Comparative study of Isidor and the Monsee Fragments. *Two hours*. Professor HENCH.
Course 15 is open to students who have had an elementary course in Old High German.
- [17. German Romanticism. Lectures and recitations. Assistant Professor WINKLER.
Course 17 is omitted in 1895-96.]

SECOND SEMESTER.

2. German Grammar Continued. Reading of easy narrative prose and modern dialogue; Storm's *Immensee*; Riehl's *Fluch der Schönheit*, and Freytag's *Journalisten*. Six sections. *Four hours*. Mr. MENSEL, Mr. HILDNER, Dr. VOSS, and Mr. ROEDDER.
4. Plays of Goethe and Lessing, with collateral prose reading and practice in writing German. This course may be elected as 4a or 4b.
 - 4a. Goethe's *Egmont*. Three sections. *Four hours*. Mr. MENSEL, Mr. HILDNER, and Dr. VOSS.
 - 4b. Lessing's *Minna von Barnhelm* and *Emilia Galotti*. Three sections. *Four hours*. Professor HENCH, Assistant Professor WINKLER, and Mr. DIEKHOF.
6. Third Year Electives. This course may be elected as 6a, 6b, etc.
 - 6a. The Second Part of Goethe's *Faust*. Schröder's edition. *Three hours*. Assistant Professor WINKLER.
 - 6b. Goethe's *Iphigenie*, *Tasso*, and *Hermann und Dorothea*. *Three hours*. Dr. VOSS.
 - 6c. *Laokoon*. A study of Lessing's essay with comparison of the critiques by Herder and Goethe. *Three hours*. Assistant Professor WINKLER.
 - 6j. Lessing's *Hamburgische Dramaturgie*. *Two hours*. Mr. DIEKHOF.
 - 6g. Behaghel's *Deutsche Sprache*. *Two hours*. Mr. MENSEL.
 - 6g. Scientific Prose. *Two hours*. Mr. HILDNER.
 - 6g. Advanced German Composition. Continuation of Course 54. *Two sections. Two hours*. Mr. MENSEL and Dr. VOSS.
8. Advanced Middle High German. *Volksepos* and *Kunstepos*. *Two hours*. Mr. MENSEL.
10. Modern German Grammar from a Historical and Comparative Point of View; II, Syntax. *Three hours*. Professor HENCH.
12. History of German Literature. II, Modern Period. *Three hours*. Assistant Professor WINKLER.
- [14. Graduate Seminary. *Two hours*. Professor THOMAS.
Course 14 is omitted in 1895-96.]
16. Historical Grammar. Phonology of the Early Germanic Dialects. Lectures based upon Noreen's *Abriss der urgermanischen Lautlehre*. *Three hours*. Professor HENCH.
- [18. German Romanticism. Lectures and recitations. Continuation of Course 17. Assistant Professor WINKLER.
Course 18 is omitted in 1895-96.]

GOTHIC.

FIRST SEMESTER.

1. Lectures on Phonology and Morphology, and Reading of the Gospels. Text-book; Braune's *Gotische Grammatik*, 4th ed. *Three hours.* Professor HENCH.

SECOND SEMESTER.

2. Critical Study of the First Two Chapters of II Corinthians, with special reference to syntax. *One hour.* Professor HENCH.

DANISH-NORWEGIAN.

The courses in Danish-Norwegian are omitted in 1895-96, but may be expected in 1896-97. They are open only to those who receive special permission.

FIRST SEMESTER.

- [1. Modern Danish-Norwegian Grammar, and the Reading of Selections. *One hour.* Professor THOMAS.]

SECOND SEMESTER.

- [2. Ibsen's Brand. *One hour.* Professor THOMAS.]

ENGLISH AND RHETORIC.

Courses 11, 12, and 14 are conducted on the seminary plan, the class being divided into small sections for the presentation of theses and reports and for extempore discussion and conference. These courses are designed for advanced students only, and are usually taken by students in their last year of residence at the University.

Courses 7, 8, 9, 10, 10a, 11, 12, 14, 15, 15a, 16, 17, 19, and 20, will ordinarily be found suitable for graduate students as well as for undergraduates. In the case of students who have taken these courses for their first degree, special advanced courses are provided for graduate study, after conference with the candidate. Some of the courses given in recent years are the following: The Development of the English Novel; The English Satirists of the Seventeenth and Eighteenth Centuries; The Romantic Revival in England at the close of the last century; The Pre-Shakespearian Drama in England; Shakespeare's Histories.

Students who desire to take a Teacher's Diploma in English will be expected to complete Courses 7, 11, and 12.

FIRST SEMESTER.

1. Paragraph-Writing. Seven sections. *Two hours.* Mr. STRAUSS and Mr. GRAY.

In the first semester Course 1 (except one section, which is arranged for engineering students) is designed especially for candidates for the degree of A. B. and Ph. B.; in the second semester, for all other students.

- 1a. Theme-Writing. *Two hours.* Mr. STRAUSS.
Course 1a is open to those who have passed Course 1.
2. Science of Rhetoric. Essays in description and narrative. Four sections. *Three hours.* Assistant Professor SCOTT and Mr. GORE.
Course 2 must be preceded by Course 1, and by Course 1 or Course 2 in Philosophy. Course 1a is recommended as an introduction to this course.
- 2a. Essays. *Two hours.* Assistant Professor SCOTT.
Course 2a is intended for students who, having passed Course 2 in the second semester, desire to continue their work in composition. It is open only to those who receive special permission.
3. Old English (Anglo-Saxon) for Beginners. Two sections. *Two hours.* Professor HEMPL.
5. English-Literature. Late Middle and Early Modern English (14th and 15th centuries), with especial reference to Chaucer. Two sections. *Two hours.* Professor HEMPL.
Course 5 must be preceded by Course 1. It is recommended that it be preceded also by Courses 3 and 4.
7. Teachers' Course. Historical English Grammar. *Two hours.* Professor HEMPL.
9. Old-English Syntax. *Two hours.* Professor HEMPL.
Course 9 must be preceded by Course 3.
10. Principles of Literary Criticism. Lectures and discussions. *One hour.* Professor DEMMON.
Course 10 is especially designed to accompany Course 11.
11. English Literature Seminary. Study of masterpieces: More's Utopia; Bacon's Essays; Milton's Areopagitica; Carlyle's Sartor Resartus; George Eliot's Silas Marner; Spenser's Faery Queen, Book I; Shakespeare's Sonnets; Milton's Paradise Lost; Dryden's Absalom and Achitophel; Wordsworth's Excursion; Tennyson's Princess; Browning's Soul's Tragedy; Swinburne's Atalanta in Calydon. Five sections. *Two hours.* Professor DEMMON.
Course 11 must be preceded by Courses 2 and 5.
15. Principles of Style. Inductive study of masterpieces of English prose (17th and 18th centuries), with a view to verifying rhetorical principles. Lectures, assigned readings, and discussions. *Two hours.* Assistant Professor SCOTT.
Course 15 is open to those who have taken Course 2.
16. Exercises in Translation. *Two hours.* Assistant Professor SCOTT.
Course 16 must be preceded by Course 2. It is open only to those who have some proficiency in the reading of French and German.

21. Development of Rhetorical Theory. A historical and comparative study of the growth of rhetorical theory from Aristotle to the present time. *Two hours.* Assistant Professor SCOTT.
Course 21 is open only to graduate students. It is also given in the second semester.

SECOND SEMESTER.

1. Paragraph-Writing. Five sections. *Two hours.* Mr. STRAUSS and Mr. GRAY.
See note to Course 1 in first semester. Three of the sections are designed for engineering students.
- 1a. Theme-Writing. Two sections. *Two hours.* Mr. STRAUSS.
Course 1a is open to those who have passed Course 1.
2. Science of Rhetoric. Essays in exposition and argument. Four sections. *Three hours.* Assistant Professor SCOTT and Mr. GORE.
See note to Course 2 in first semester.
- 2b. Essays. Four sections. *Two hours.* Assistant Professor SCOTT.
Course 2b is intended for students who, having passed Course 2 in the first semester, desire to continue their work in composition. It is open only to those who receive special permission.
4. English Literature. Transition and Early Middle English (12th and 13th centuries). *Two hours.* Professor HEMPL.
Course 4 must be preceded by Course 3.
6. English Literature. Modern English. *Three hours.* Professor HEMPL.
Course 6 must be preceded by Course 5. In Course 6 a manual is used to give a general survey of the subject; but special attention is given to each author or period by certain members of the class, each member thus making about half a dozen special studies and reports.
8. [Old-English (Anglo-Saxon) Poetry. *Two hours.* Professor HEMPL.
Course 8 must be preceded by Course 3. It is omitted in 1895-96, but may be expected in 1896-97.]
- 10a. Principles of Literary Criticism. Lectures and discussions. *One hour.* Professor DEMMON.
Course 10a must be preceded by Course 10. It is designed to accompany Course 12.
12. Shakespeare Seminary. Plays selected: A Midsummer Night's Dream; The Merchant of Venice; As You Like It; Twelfth Night; The Tempest; Richard III; the two parts of Henry IV; Henry V; Hamlet; Othello; King Lear; Macbeth; Coriolanus. Four sections. *Two hours.* Professor DEMMON.
Course 12 must be preceded by Course 11.

14. American Literature Seminary. Authors studied: Irving, Poe, Hawthorne, Bryant, Longfellow, Emerson, Thoreau, Bayard Taylor, Whittier, Holmes, Lowell, Howells, and James. *Two hours.* Professor DEMMON.

Course 14 must be preceded by Course 11. Representative works of the authors named are studied and compared with masterpieces of British authors, and an attempt made to discover the distinctively American element.

- 15a. Principles of Style. Inductive study of masterpieces of English prose (19th century), with a view to verifying rhetorical principles. Lectures, readings, and discussions. *Two hours.* Assistant Professor SCOTT.

Course 15a is open to those who have taken Course 2.

17. Principles of Linguistic Science. *Two hours.* Professor HEMPL. In Course 17 the general principles of philology are studied with the aid of a text-book (Giles's Comparative Philology) and lectures. The course is intended for students of either ancient or modern languages.

18. Advanced Composition. *Two hours.* Assistant Professor SCOTT. Course 18 is intended for those who are already proficient in writing, but who feel the need of practice and criticism. It is open only to those who receive special permission.

19. Spoken English, with special reference to American English. *Two hours.* Professor HEMPL.

In Course 19 a study is made of colloquial English as distinguished from the English of books and artificial speech, and an attempt is made to settle some of the important facts as to the fortunes of English speech in our country.

20. Old-English Phonology and Morphology. *Three hours.* Professor HEMPL.

Course 20 must be preceded by Course 3.

21. Development of Rhetorical Theory. A historical and comparative study of the growth of rhetorical theory from Aristotle to the present time. *Two hours.* Assistant Professor SCOTT.

Course 21 is open only to graduate students. It is also given in the first semester.

ELOCUTION AND ORATORY.

FIRST SEMESTER.

1. Elocution. Exercises in vocal culture, breathing, position, and technique of gesture; pronunciation and emphasis; the Rush and Delsarte philosophies; elements of quality and force of voice, with their applications. Two sections. *Two hours.* Professor TRUEBLOOD.

3. Study of Great Orators. Ancient orators, and modern orators of Continental Europe. Lectures on methods of public address and sources of power; study of representative selections. *Two hours.* Professor TRUEBLOOD.
Course 3 must be preceded by Courses 1 and 2; and by Courses 1 and 2 in English.
5. Shakespearian Reading. Critical study and reading of two of Shakespeare's plays. *Two hours.* Professor TRUEBLOOD.
Course 5 must be preceded by Courses 1 and 2.

SECOND SEMESTER.

2. Elocution. Exercises in vocal culture continued; elements of pitch and time with their applications; study and application of the principles of action; delivery of short extracts from masterpieces of the orator. Two sections. *Two hours.* Professor TRUEBLOOD.
Course 2 must be preceded by Course 1.
4. Study of Great Orators. English and American orators. *Two hours.* Professor TRUEBLOOD.
Course 4 must be preceded by Courses 1, 2, and 3; and by Courses 1 and 2 in English.
6. Oral Discussions, applications of the principles of formal logic and elocution in debating leading questions of the day. Designed to develop readiness of extemporization. Preparation of briefs. *Two hours.* Professor TRUEBLOOD.
Course 6 must be preceded by Courses 1 and 2; by Courses 1 and 2 in English; and by a course in logic.

MUSIC.

The courses in music are open to students who evince sufficient musical ability to pursue them with profit. Courses 1 and 2 are introductory to the technical and critical courses. Courses 1*a* and 2*a* are open to students who possess good voices and can read readily at sight; students electing these courses are required to sing at the Vesper Services. No advanced credit will be allowed for work equivalent to Courses 1, 1*a*, 2, and 2*a*.

Courses 3 to 8 are technical and represent four years' work. Course 10*a* is intended primarily for graduate students, but is also open to undergraduates who are fitted to do advanced work. Courses 9*a*, 9*b*, 11*a*, and 11*b* are open to students who wish to study the historical development of music, as well as its significance as an art.

FIRST SEMESTER.

1. Fundamental Principles of Musical Science. *Two hours.* Professor STANLEY.

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- 1a. Choral Music. *Two hours.* Professor STANLEY.
3. Science of Harmony. *Two hours.* Professor STANLEY.
- 5a. Simple Counterpoint. *Two hours.* Professor STANLEY.
- 6a. Double Counterpoint. *Two hours.* Professor STANLEY.
7. Canon. Fugue. *Two hours.* Professor STANLEY.
- 9a. The History of Music, including Modern Opera. Lectures. *Two hours.* Professor STANLEY.
- 10a. Free Composition. Instrumentation. *Two hours.* Professor STANLEY.
- 11a. Musical Criticism. Lectures. *One hour.* Professor STANLEY.

SECOND SEMESTER.

2. Fundamental Principles of Musical Science, including Elementary Harmony. *Two hours.* Professor STANLEY.
- 2a. Choral Music. *Two hours.* Professor STANLEY.
4. Science of Harmony. *Two hours.* Professor STANLEY.
- 5b. Simple Counterpoint. *Two hours.* Professor STANLEY.
- 6b. Double Counterpoint and Simple Forms. *Two hours.* Professor STANLEY.
8. Canon. Fugue. Sonata Form. *Two hours.* Professor STANLEY.
- 9b. The History of Music. Wagner's Music Dramas. Lectures. *Two hours.* Professor STANLEY.
- 11b. Music in its Ethical Relations. Lectures. *One hour.* Professor STANLEY.

HISTORY.

Courses 1 and 2, taken in the order indicated by the numbers, must precede all other courses in history, with the exception that Course 3 may be taken in connection with either Course 1 or Course 2. In case the former alternative is chosen, Course 4 may be taken with Course 2.

FIRST SEMESTER.

1. The General History of Europe from the fall of the Roman Empire to the close of the Middle Ages. Lectures, and quizzes on lectures and on assigned reading. *Three hours.* Mr. Dow. Course 1 is also given in the first semester.
2. The General History of Europe from the close of the Middle Ages to the outbreak of the French Revolution. Lectures, and quizzes on lectures and on assigned reading. *Three hours.* Mr. Dow. Course 2 is also given in the second semester.
3. The Political and Constitutional History of England to the Accession of James I. Lectures and prescribed reading. Two sections. *Three hours.* Mr. JOHNSTON.

5. Advanced Study of the Constitutional History of England to the reign of Edward I, based largely on Stubbs's Select Charters. *Three hours.* Mr. JOHNSTON.
7. History and Institutions of the more Ancient Nations and of Greece. Text-book: Oman. *Three hours.* Mr. JOHNSTON.
9. The First Six Christian Centuries. Lectures and topical work. *Two hours.* Mr. DOW.
11. History of Europe from 1789 to 1815. Lectures. *Two hours.* Professor HUDSON.
- 11a. Supplementary to Course 11. Quiz on lectures, together with a study of some of the more important original sources. Two sections. *One hour.* Professor HUDSON.
14. The Political and Constitutional History of the United States. Lectures. *Two hours.* Professor McLAUGHLIN.
- 14a. Supplementary to Course 14. Quiz on lectures, text-book, and assigned reading. Two sections. *One hour.* Professor McLAUGHLIN.
16. Seminary in American History. Reports on current historical literature and discussion of assigned topics. *One hour.* Professor McLAUGHLIN.
Course 16 is open to graduate students only.
18. Research Work in American History. *Two hours.* Professor McLAUGHLIN,
Course 18 is open only to graduate students and to seniors who have obtained permission.
19. Constitutional Law and Political Institutions of the United States. Text-books: Bryce and Cooley. *Three hours.* Professor McLAUGHLIN.
21. Comparative Constitutional Law, with special reference to the Political Institutions of England. Lectures. *Two hours.* Professor HUDSON.
23. Seminary for the Study of Municipal Government. *Two hours.* Professor HUDSON.
Course 23 can be taken only in connection with Course 21.
25. Graduate Seminary for the comparative study of Political Institutions. The subject for 1895-96 is the organization, powers, and procedure of legislative bodies. Professor HUDSON.

SECOND SEMESTER.

1. The General History of Europe from the fall of the Roman Empire to the close of the Middle Ages. Lectures, and quizzes on lectures and on assigned reading. *Three hours.* Mr. DOW.
Course 1 is also given in the first semester.

2. The General History of Europe from the close of the Middle Ages to the outbreak of the French Revolution. Lectures, and quizzes on lectures and on assigned reading. *Three hours.* Mr. DOW.
- Course 2 is also given in the first semester.
4. The Political and Constitutional History of England since the Accession of James I. Lectures and assigned reading. *Three hours.* Mr. JOHNSTON.
- Course 4 must be preceded by Course 3.
6. Advanced Study of the Constitutional History of England during the Puritan Revolution, based on Gardiner's Constitutional Documents. *Three hours.* Mr. JOHNSTON.
8. Roman History and Institutions. Text-book: Mommsen. *Three hours.* Mr. JOHNSTON.
10. The History of the Renaissance. Lectures and topical work. *Two hours.* Mr. DOW.
12. History of Europe since 1815. Lectures. *Two hours.* Professor HUDSON.
- 12a. Supplementary to Course 12. Quiz on lectures together with a study of some of the more important original sources. Two sections. *One hour.* Professor HUDSON.
13. American Colonial History. *Three hours.* Professor McLAUGHLIN.
15. Political and Constitutional History of the United States. Lectures. *Two hours.* Professor McLAUGHLIN.
- Course 15 is a continuation of Course 14.
- 15a. Supplementary to Course 15. Quiz on lectures, text-book, and assigned reading. Two sections. *One hour.* Professor McLAUGHLIN.
17. Research Work in the History of the United States, with special reference to bibliography and sources of information. *Two hours.* Professor McLAUGHLIN.
20. Leading Cases in the Constitutional Law of the United States, with special reference to their historical significance. *One hour.* Professor McLAUGHLIN.
22. Comparative Constitutional Law with special reference to the Political Institutions of Germany, Switzerland, France, Belgium, and Italy. Lectures. *Two hours.* Professor HUDSON.
24. Seminary for the Study of Municipal Government. Continuation of Course 23. *Two hours.* Professor HUDSON.
26. Graduate Seminary for the comparative study of Political Institutions. Continuation of Course 25. Professor HUDSON.

PHILOSOPHY.

A student intending to take all the work in philosophy should take the courses in about the order of their numbers, beginning with Course 1 in the second semester of the second or first semester of the third year of residence at the University. Students not intending to make a specialty of philosophy are strongly recommended to postpone work in philosophy until the third year.

Courses 1a, 1b, 2, 3, 3a, 4, 5, 6, 7, and 15, are primarily for undergraduates; other courses are for graduates and advanced undergraduates. Courses 5 and 6 are introductory to Courses 8, 9, 10, 11, 12, and 13. Students should consult with the instructors before making election.

The attention of students in philosophy is called especially to the following courses in other branches of study: Greek 10 and 15; Latin 25; French 11 and 26; German 17 and 18; Science and Art or Teaching 3 and 4; Mathematics 3, 4, 9, 17.

The Philosophical Club holds several meetings during each semester. Papers are read by the instructors and by students from the courses of special research.

FIRST SEMESTER.

1. Logic. This course may be elected as 1a or 1b.
 - 1a. Elementary Logic. Text-book: Jevons's *Lessons in Logic*. Two sections. *Two hours*. Professor LLOYD and Mr REBEC.
 - 1b. Deductive and Inductive Logic. Text-book: Minto's *Logic*. *Three hours*. Mr REBEC.

Either 1a or 1b meets the requirements for a degree. 1b is recommended to those who are specially interested in philosophy or who have already done work in logic. Students who have taken 1a, may take 1b as a *two hour* course. The course is also given in the second semester.
2. Psychology. Text-books: James's *Psychology* (Briefer Course) and Dewey's *Psychology*. Three sections. *Three hours*. Mr. REBEC and Dr. PIERCE.

Course 2 is also given in the second semester. The section using Dewey's *Psychology* is for students who have already had some work in philosophy.
- 2a. Special studies in Psychology. Reading, reports, thesis. *One hour*. Dr. PIERCE.
- [3. British Ethics. A general survey from Hobbes to Mill. *Two hours*. Professor LLOYD.

Course 3 is omitted in 1895-96.]

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- 3a. Political Philosophy. A critical study of society, sovereignty, rights, duty, and the idea of the social organism. *Two hours.* Professor LLOYD.
5. History of Ancient and Mediæval Philosophy. Lectures and reading. *Three hours.* Professor LLOYD.
- 5a. Special Studies in Ancient Philosophy. Reading, reports, thesis. *One hour.* Professor LLOYD.
10. Kant's Critique of Pure Reason. Meiklejohn's Translation. Lectures, reading, reports. *Two hours.* Professor LLOYD.
- 10a. Special studies in Kant. Thesis. *One hour.* Professor LLOYD.
12. Aesthetics. Readings, reports, lectures. Bosanquet's History of Aesthetics will serve as a basis of the study. *Two hours.* Mr. REBEC.
15. Beginners' Course in Experimental Psychology. This course may be elected as 15a, *two hours*; or 15b, *three hours*. Dr. PIERCE. Course 15 is open to students who have had Course 2 or an equivalent. It is also given in the second semester.
16. Advanced Course in Original Investigation in Experimental Psychology. This course may be elected as 16a, *three hours*; or 16b, *six hours*. Dr. PIERCE. Course 16 is open to students who have had Course 15 or an equivalent.

SECOND SEMESTER.

1. Logic. This course may be elected as 1a or 1b.
 - 1a. Elementary Logic. *Two hours.* Mr. REBEC.
 - 1b. Deductive and Inductive Logic. *Three hours.* Mr. REBEC.See note to Course 1 in the first semester.
2. Psychology. Text-books: James's Psychology and Dewey's Psychology. Three sections. *Three hours.* Mr. REBEC and Dr. PIERCE. Course 2 is also given in the first semester. The section using Dewey's Psychology is for students who have already had some work in philosophy.
4. Philosophy of Religion. Lectures and assigned reading. *Two hours.* Professor LLOYD.
5. History of Modern Philosophy. Lectures and reading. *Three hours.* Professor LLOYD. Course 6 should be preceded by Course 5.
7. Ethics. Text-book: Dewey's Study of Ethics. *Three hours.* Professor LLOYD.
- 7a. Special Studies in Ethics. Thesis. *One hour.* Professor LLOYD.

- 8a. Plato's Republic. Collateral reading and theses required. *Two hours.* Mr. REBEC.
 9. The Relations of Rhetoric to Philosophy. A survey of the historical connection between rhetoric and philosophy, and a tracing of the psychological, ethical, æsthetical, and logical elements involved in expression. *Two hours.* Mr. REBEC.
 11. Continental Philosophy. A study of Descartes, Spinoza, and Leibnitz. *Two hours.* Dr. PIERCE.
 - [11a. Spinoza. Elwes's Translation of Spinoza's works. Lectures, reading, reports. *Two hours.* Professor LLOYD.
Course 11a is omitted in 1895-96.]
 13. Hegel. Lectures and study of the Logic. *Two hours.* Professor LLOYD.
 15. Beginners' Course in Experimental Psychology. This course may be elected as 15a, *two hours*; or 15b, *three hours*. Dr. PIERCE. Course 15 is open to students who have had Course 2 or an equivalent. It is also given in the first semester.
 17. Continuation of Course 16. Original investigation. This course may be elected as 17a, *three hours*; or 17b, *six hours*. Dr. PIERCE.
- Course 17 is open to students who have had Course 15.

THE SCIENCE AND ART OF TEACHING.

Students who wish to prepare themselves for ordinary class-room duties, are advised to pursue Course 1, if they can take but one; those who propose to assume the management of high schools, or graded schools, should take Course 5, in connection with Course 1. In both cases, however, it is desirable for them to pursue Course 2. The order in which Courses 1 and 2 are taken is not material. Students are recommended to take Course 1 or Course 2 before the historical courses. Courses of reading are prescribed in connection with Courses 1 and 2.

Courses 1, 2, and 5 are properly professional courses, and require a certain preparation. It is not desirable for students who have not studied psychology to take up either 1 or 2, unless they have had at least some practical experience in teaching, or made considerable progress in general study.

For the conditions on which the Teacher's Diploma and the Teacher's Certificate are given, see page 110.

FIRST SEMESTER.

1. Practical Pedagogy. The arts of teaching and governing; methods of instruction and general school-room practice; school hygiene; school law. Recitations and lectures. Text-book: Compayré's Lectures on Pedagogy. *Four hours.* Professor HINSDALE.

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3. History of Education, Ancient and Mediæval. Recitations and lectures. Text-book: Compayré's History of Pedagogy. The subjects treated in the lectures given in this course are Oriental, Greek, and Roman education, and the rise and early development of the Christian schools. *Three hours.* Professor HINSDALE.
5. School Supervision. General school management, the art of grading and arranging courses of study, the conduct of institutes, etc. Recitations and lectures. Text-book: Payne's Chapters on School Supervision. *Three hours.* Professor HINSDALE.

SECOND SEMESTER.

2. Theoretical and Critical Pedagogy. The principles underlying the art of teaching and governing. Lectures. *Four hours.* Professor HINSDALE.
4. History of Modern Education. Recitations and lectures. Text-book: Compayré's History of Pedagogy. The topics dealt with in this course of lectures are the movements of modern educational thought and practice. *Three hours.* Professor HINSDALE.
6. The Comparative Study of Educational Systems, Domestic and Foreign. Lectures. *Two hours.* Professor HINSDALE.
7. Seminary. Study and discussion of special topics in the history and philosophy of education. The subject for 1895-96 is the Psychology and Pedagogy of Herbart. The examination of these topics will follow in the main De Garmo's Herbart and the Herbartians. *Two hours.* Professor HINSDALE.

POLITICAL ECONOMY AND SOCIOLOGY.

Courses in the department of political economy are classified as undergraduate, intermediate, and graduate courses. The undergraduate courses, viz., Courses 2 and 5, may be taken by any student, but will not be accepted as counting for an advanced degree. The intermediate courses, viz., Courses 4, 6, 8, 9, 11, 12, 13, 17, 18, 19, 21, 22, and 24 may also be taken by any student; in the case, however, of students who are pursuing their work on the university system, and of graduate students, special additional instruction of one hour a week is given in connection with each course. For 1895-96 this work is also open to seniors specializing in political economy, who can satisfy the instructor of their fitness. The extra hour of instruction is devoted to a more careful analysis and a more extended discussion than is possible in the lectures. The graduate courses are Courses 23, 26, 27, and 28. A Sociology Club meets every Saturday morning.

FIRST SEMESTER.

3. **History of the Development of Industrial Society.** Lectures and quiz in four sections. *Three hours.* Professor ADAMS and Mr. ORTON.
Course 3 is designed to be introductory to all courses in political economy. It is not, however, required for admission to such courses. It embraces a history of English industrial society from the twelfth century to the present time, and is designed to show how modern industrial customs and rights came into existence. It is desirable that it should be preceded by Course 1 in history. Students who intend to take all the work offered in economics should elect Course 3 the first semester of their second year of residence.
5. **Problems in Political Economy.** Lectures and quiz in three sections. *Four hours.* Professor ADAMS and Mr. ORTON.
Course 5 treats in a cursory manner current problems in political economy. The problems studied are the following: The Railway Problem, Industrial Crises, Free Trade and Protection, Industrial Reforms, Labor Legislation, and Taxation. It is designed as the supplement of Course 2, by which it must be preceded, and is introductory to Courses 4, 6, 8, 9, 11, 12, and 13, although it is not required for these courses.
8. **Socialism, including Communism, Collectivism, Land Nationalization, State Socialism, etc.** *Two hours.* Professor TAYLOR.
9. **Money and Banking.** *Two hours.* Professor TAYLOR.
- 9a. **Supplementary to Course 9.** Reports on assigned reading and some research work. For graduate students and others receiving special permission. *One hour.* Professor TAYLOR.
11. **Industrial History of the United States.** *Two hours.* Professor TAYLOR.
- 11a. **Supplementary to Course 11.** Reports on assigned reading. For graduate students and others receiving special permission. *One hour.* Professor TAYLOR.
13. **The Theory and Practice of Statistics.** *One hour.* Dr. COOLEY.
Course 13 treats statistics as a method of social research, an instrument important not only to economists and statisticians, but also to all who wish to qualify themselves to understand or criticize current social and political discussion.
17. **Seminary in Finance.** *Two hours.* Professor ADAMS.
19. **Principles of Sociology.** Lectures and quiz in two sections. *Four hours.* Dr. COOLEY.

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Course 19 aims at a systematic and comprehensive study of the underlying principles of social science. It embraces a brief historical review of the development of institutions, but is chiefly concerned with an analysis of existing society.

21. Special Studies in Sociology. Reading, reports, and discussions. *Two hours.* Dr. COOLEY.
25. Critical Studies in Economics and Sociology. *Three hours.* Professor ADAMS, Professor TAYLOR, and Dr. COOLEY.
Course 25 is specially intended for graduate students, but is open to seniors specializing in political economy who satisfy the instructors of their fitness for the work.
27. Current Economic Legislation and Literature. *Two hours.* Professor ADAMS, Professor TAYLOR, Dr. COOLEY, and Mr. ORTON.

SECOND SEMESTER.

2. Elements of Political Economy. Lectures and quiz in four sections. *Four hours.* Professor TAYLOR.
4. Principles of the Science of Finance. Lectures and quiz in three sections. *Four hours.* Professor ADAMS and Mr. ORTON.
6. The Transportation Problem. Lectures and quiz. *Three hours.* Professor ADAMS and Mr. ORTON.
12. History of Political Economy. Text-book, with supplementary lectures and reports. *Two hours.* Professor TAYLOR.

Course 12 is important to all students specializing in political economy.

18. Seminary in Economics. *Two hours.* Professor ADAMS.
22. Problems in Sociology. Lectures and quiz in two sections. *Four hours.* Dr. COOLEY.

Course 22 embraces a study of the treatment of criminals, poor-relief, the assimilation of immigrants, the development of great cities, and other sociological questions of present importance.

24. Special Studies in Sociology and Statistics. *Two hours.* Dr. COOLEY.

Course 24 is similar in character to Course 21. Students who have taken Course 13 and wish to follow it with practical training in statistical work, will have an opportunity to do so.

26. Critical Studies in Economics and Sociology. Continuation of Course 25. *Three hours.* Professor ADAMS, Professor TAYLOR, and Dr. COOLEY.
28. Current Economic Legislation and Literature. *One hour.* Professor ADAMS, Professor TAYLOR, Dr. COOLEY, and Mr. ORTON.

INTERNATIONAL LAW.

FIRST SEMESTER.

1. Lectures on International Law. *Two hours.* President ANGELL.
Course 1 is open only to those who have completed two courses in history; Course 2 is especially recommended as one of the two.

SECOND SEMESTER.

2. History of Treaties. *Two hours.* President ANGELL.
Course 2 must be preceded by Course 1.

BIBLIOGRAPHY.

FIRST SEMESTER.

1. Historical, Material, and Intellectual Bibliography. Lectures. *One hour.* Professor R. C. DAVIS.

MATHEMATICS.

Courses 1, 2, 3, 4, and 6 are identical with courses prescribed for students in the Department of Engineering. Courses 1a, 2a, 3a, and 4a, to be taken in their order, are intended for other students; Course 1a being required for the degree of B. L., and 1a and 2a for the degrees of A. B., Ph. B., and B. S. Students so desiring may substitute Courses 1, 1b, and 2 for the shorter Courses 1a, 2a; and Courses 3, 4, for the shorter Courses 3a, 4a.

Courses 1, 1a, 1b, 2, 2a, 2b, 3, 3a, 4, 4a, and 6 are intended primarily for undergraduates; Courses 5, 7, 8, 10, 12, 15, 19, 20, 21, and 22 are for graduates and undergraduates; Courses 9, 11, 13, 14, 16, 17, 18, 23, and 24 are primarily for graduates, though undergraduates of exceptional ability are admitted by special permission.

FIRST SEMESTER.

1. Algebra and Analytic Geometry (I). Five sections. *Four hours.*
Mr. LYMAN, Mr. HALL, Mr. GODDARD, and Mr. COAR.
- 1a. Plane Trigonometry and Algebra. Ten sections. *Three hours.*
Mr. LYMAN, Mr. HALL, Mr. GODDARD, and Mr. COAR.
- 1b. Plane Trigonometry. Three sections. *Two hours.* Mr. GODDARD and Mr. COAR.
3. Calculus. Four sections *Five hours* Assistant Professor ZIWET, Mr. LYMAN, and Dr. GLOVER.
- 3a. Calculus (I). *Four hours.* Professor BEMAN.
5. Solid Analytic Geometry (I). *Two hours.* Professor BEMAN.

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6. Calculus and Mechanics (II). Three sections. *Four hours.* Assistant Professor ZIWET and Mr. LYMAN.
7. Projective Geometry (I). *Three hours.* Dr. GLOVER.
9. Differential Equations (I). *Three hours.* Professor BEMAN.
11. Introduction to the Theory of Functions (I). *Three hours.* Dr. GLOVER.
13. Mathematical Reading. *Credit arranged with instructor.*
Course 13 is designed to give graduate students an opportunity to read standard mathematical works under the direction of the Faculty.
16. Advanced Mechanics (II). *Two hours.* Assistant Professor ZIWET.
19. Teachers' Seminary. Algebra. *Two hours.* Professor BEMAN.
Course 19 is open only to those who have completed Courses 1, 2, 3, 4, or 1a, 2a, 3a, 4a.
- [21. Fourier's Series, and Spherical, Cylindrical, and Ellipsoidal Harmonics. *Two hours.*
Course 21 is omitted in 1895-96.]
- [23. Theory of Substitutions (I). *Three hours.*
Course 23 is omitted in 1895-96.]

SECOND SEMESTER.

2. Analytic Geometry (II). Six sections. *Four hours.* Mr. LYMAN, Mr. HALL, Mr. GODDARD, and Mr. COAR.
- 2a. Plane Analytic Geometry. Ten sections. *Four hours.* Assistant Professor ZIWET, Mr. LYMAN, Mr. HALL, Mr. GODDARD, and Mr. COAR.
- 2b. Spherical Trigonometry. *Two hours.* Mr. HALL.
4. Calculus and Mechanics (I). Three sections. *Five hours.* Assistant Professor ZIWET, Mr. LYMAN, and Dr. GLOVER.
- 4a. Calculus (II). *Four hours.* Professor BEMAN.
8. Projective Geometry (II). *Three hours.* Dr. GLOVER.
10. Quaternions. *Credit arranged with instructor.* Professor BEMAN.
12. Modern Higher Algebra. *Three hours.* Mr. HALL.
13. Mathematical Reading. *Credit arranged with instructor.*
See note to Course 13 in first semester.
14. Introduction to the Theory of Functions (II). *Three hours.* Dr. GLOVER.
15. Advanced Mechanics (I). *Three hours.* Assistant Professor ZIWET.
17. Differential Equations (II). *Two hours.* Professor BEMAN.
18. Solid Analytic Geometry (II). *Two hours.* Professor BEMAN.
20. Teachers' Seminary. Geometry. *Two hours.* Professor BEMAN.
Course 20 is open only to those who have completed Courses 1, 2, 3, 4, or 1a, 2a, 3a, 4a.

- [22. Fourier's Series, and Spherical, Cylindrical, and Ellipsoidal Harmonics (II). *Two hours.*
Course 22 is omitted in 1895-96.]
- [24. Theory of Substitutions. *Three hours.*
Course 24 is omitted in 1895-96.]

PHYSICS.

FIRST SEMESTER.

1. Mechanics, Sound, and Light. *Five hours.* Assistant Professor REED.
Course 1 is open to those who have passed an entrance examination in physics, and to all others who have sufficient preparation. A knowledge of plane trigonometry is indispensable.
3. Physical Laboratory Work for Beginners. This course may be elected as *3a, three hours*; or *3b, two hours.* Dr. GUTHE.
Course 3 must be preceded or accompanied by Course 1. It is also given in the second semester. Students presenting note-books from High School physical laboratories approved by this department, may be allowed three hours credit instead of two for Course 3b.
4. Primary and Secondary Batteries. *Two hours.* Dr. GUTHE.
Course 4 must be preceded by Courses 1, 2, 3a or 3b, and a course in general or in analytical chemistry.
5. Electrical Measurements. Lectures, recitations, and laboratory work. *Three hours.* Professor CARHART, Assistant Professor PATTERSON, and Dr. GUTHE.
Course 5 must be preceded by Courses 1, 2, and 3a or 3b. A knowledge of calculus is also required.
6. Sound, Viole, Acoustique. *Three hours.* Assistant Professor REED.
Course 6 must be preceded by Courses 1, and 3a or 3b. A knowledge of calculus is required.
7. Electricity and Magnetism: Mascart and Joubert. *Three hours.* Assistant Professor PATTERSON.
Course 7 must be preceded by Course 2. A knowledge of calculus is also required.
9. Distribution of Electricity. Lectures. *Two hours.* Assistant Professor PATTERSON.
Course 9 must be preceded by Course 8a or 8b.
13. The Alternate Current Apparatus. *Two hours.* Professor CARHART.
Course 13 must be preceded by Course 8a or 8b.
14. Photometry of Electric Lamps: Palaz. Recitations and laboratory work. *Two hours.* Assistant Professor PATTERSON.

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16. Theory of Heat: Preston. *Two hours.* Professor CARHART.
17. Geometrical Optics. *Two hours.* Assistant Professor REED.
Course 17 must be preceded by Course 1. A knowledge of calculus is also required.
20. Advanced Laboratory Work in Sound. *Two hours.* Assistant Professor REED.
Course 20 must be preceded by Course 6.

SECOND SEMESTER.

2. Electricity and Magnetism. *Four hours.* Professor CARHART and Assistant Professor REED.
Course 2 must be preceded by Course 1 and by a course in general or in analytical chemistry.
- 2a. Heat. Lectures and recitations. *Two hours.* Professor CARHART and Assistant Professor REED.
Course 2a must be preceded by Course 1.
3. Physical Laboratory Work for Beginners. This course may be elected as 3a, *three hours*; or 3b, *two hours*. Assistant Professor PATTERSON and Dr. GUTHE.
See note to Course 3 in first semester.
8. Electro-Dynamic Machinery. Lectures and laboratory work. This course may be elected as 8a, *four hours*; or 8b, *three hours*. Professor CARHART and Assistant Professor PATTERSON.
Course 8 must be preceded by Course 5. Course 8a is for students in electrical engineering only.
10. Electricity and Magnetism: Mascart and Joubert. *Two hours.* Assistant Professor PATTERSON.
Course 10 must be preceded by Course 7.
11. Theory of Light: Preston. Recitations and laboratory work. *Four hours.* Assistant Professor REED.
Course 11 must be preceded by Course 6. A knowledge of calculus is also required.
12. Advanced Laboratory Work in Electricity and Magnetism. *Three hours.* Dr. GUTHE.
Course 12 must be preceded by Course 5.
15. Photometry. Continuation of Course 14. Laboratory work. *One or two hours.* Assistant Professor PATTERSON.
18. Theory of Potential and its Applications. *Two hours.* Dr. GUTHE.
Course 18 must be preceded by Course 2. A knowledge of calculus is required.
19. Design of Electrical Machinery and Appliances. Lectures. *Two hours.* Professor CARHART.
Course 19 must be preceded by Course 8a or 8b.

21. Advanced Laboratory Work in Light. *Two hours.* Assistant Professor REED.

Course 21 must be preceded by Course 11.

GENERAL CHEMISTRY.

Students who enter upon the study of chemistry with the intention of fitting themselves for teaching the science, or who intend to acquire a scientific knowledge of the subject for other purposes, should take Courses 1, 3, 4, and 5. Courses 3a and 10 are also recommended to all except those who wish to make a purely technical application of the study. The research laboratory is intended primarily for graduate students, although advanced undergraduates may be admitted by special arrangement.

FIRST SEMESTER.

1. Elementary Inorganic Chemistry, Descriptive and Experimental. Lectures and recitations. *Three hours.* Mr. HIGLEY.
5. Theoretical Chemistry of Recent Years. Lectures. *Two hours.* Professor FREER.

Course 5 must be preceded by Courses 4 and either 2 or 3 in general chemistry, and by Courses 1 and 10 in analytical and organic chemistry. Course 4 in analytical chemistry is also recommended. The course is intended for undergraduate students, but is also suitable for graduates. For the latter class of students an additional hour is given to laboratory work in the methods of determining molecular weights.

EITHER FIRST OR SECOND SEMESTER.

2. Laboratory Work in General Chemistry. *Three hours.* Mr. HIGLEY and Mr. LICHTY.

Course 2 must be preceded or accompanied by Course 1 or an equivalent. It is supplementary to Course 1 and covers in the laboratory the ground covered by lectures in Course 1.

- 2a. Laboratory Work. Continuation of Course 2. *Three hours.* Mr. HIGLEY and Mr. LICHTY.
3. Laboratory Work in General Chemistry. *Five hours.* Mr. HIGLEY and Mr. LICHTY.

Course 3 must be preceded by Course 1 or an equivalent, or accompanied by Course 1. It may be taken as a teacher's course. A teacher's diploma is granted to students who have completed Courses 1, 3, 4, and 5, and also Courses 1 and 4 in analytical chemistry.

- 3a. Laboratory Work. Continuation of Course 3. *Five hours.* Professor FREER and Mr. HIGLEY.

Students taking Course 3a, after completing the regular work, are given some special advanced work in systematic inorganic preparations. If they wish to continue the work in the following year, they may do so by electing Course 7.

7. Laboratory Research in General Inorganic Chemistry. Continuation of Course 3a. *Credit arranged with instructors.* Professor FREER, Mr. HIGLEY, and Mr. LICHTY.

Although Course 7 is intended primarily for undergraduates who have taken the regular courses in laboratory instruction given in this department, it is also intended for graduate students who have received equivalent instruction elsewhere.

9. Laboratory Research in General Chemistry. *Credit arranged with instructors.* Professor FREER and Mr. SHERMAN.

Course 9 is intended primarily for graduates. In any case it is limited to a small number of students and is open only to persons who receive special permission. Students electing this course must be able to read German and French, and must have a knowledge of organic preparations.

SECOND SEMESTER.

4. Inorganic Chemistry, Descriptive and Experimental. Continuation of Course 1. *Four hours.* Professor FREER.
Course 4 must be preceded by Course 1, or by an equivalent course of study in some other institution.
6. Journal Club. *One hour.* Professor FREER.
Course 6 must be preceded by Course 5. The professor and all the instructors and assistants in the department take part in the Journal Club. While it is intended primarily for graduates, it is also open to undergraduates.
8. The Rarer Chemical Elements. Lectures. *Two hours.* Mr. HIGLEY.
Course 8 is for graduates and undergraduates.
10. Laboratory Work in the Methods of Determining Molecular Weights. *Three hours.* Mr. HIGLEY.
11. Spectroscopic Analysis and General Use of the Spectroscope. Lectures and laboratory work. *Four hours.* Mr. LICHTY.
12. Laboratory Work with the Polariscope, etc. *Two hours.* Mr. LICHTY.

ANALYTICAL CHEMISTRY AND ORGANIC CHEMISTRY.

The laboratory work requires from two to three hours daily, taken, in the first semester, between 1 and 5 P. M.; in the second semester, between 1 and 6. Permission for forenoon hours is given when necessary.

It is advisory that a laboratory course in general chemistry, either Course 2 or Course 3, the latter course being preferable in extent, should precede laboratory work in analytical or in organic chemistry. Those entering upon the study of analytical chemistry, whether for scientific or technical ends, should first take Courses 1 and 4. In organic chemistry, Course 10 or Courses 10 and 11 should be taken first, and either Course 12 or Course 14 may be taken next. In synthetic research, Courses 10, 11, 12, 13, and 17 may be taken. For commercial analysis, Courses 10, 11, and 14 should be taken. For metallurgical analysis, Courses 1, 4, 6, 7, and 9 are required. For manufacturing chemistry, Courses 1, 4, 5, 10, 11, 14, 15, and 16 are advised. In preparation for physiological chemistry, Courses 1, 4, and 10 are requisite.

Courses 13, 17, 18, 19, 19a, 22, 23, 24, and 25 are intended primarily for graduates and undergraduate students who have had a somewhat extended training in chemistry. The permission of the instructor must be obtained before electing them. It is suggested that Course 10 in general chemistry precede Courses 13, 18, and 19a in organic chemistry.

FIRST SEMESTER.

1. Qualitative Analysis. Recitations and laboratory work. *Ten hours.*
Professor JOHNSON.
Course 1 must be preceded by a course in general chemistry.
9. Technical Examination of Gold and Silver Ores, including the Fire Assay. Laboratory work with lectures and reading. *Two hours.* Professor E. D. CAMPBELL.
Course 9 must be preceded by Course 4. Course 2 in mineralogy is recommended.
10. Organic Chemistry. Lectures and recitations. *Five hours.* Professor PRESCOTT.
Course 10 is open to those who have taken a course in general chemistry and a course in analytical chemistry.
15. Outlines of Chemical Technology. Lectures. *One hour.* Professor JOHNSON.
Course 15 is open to those who have taken Course 1 or Course 3.
20. Diazo-compounds, in both the fatty and the aromatic series of organic chemistry. Lectures. *Two hours.* Dr. GOMBERG.
Course 20 must be preceded by Course 10 and be preceded or accompanied by Course 11 or 12.
21. Technical Gas Analysis. Laboratory work. *One hour.* Professor E. D. CAMPBELL.
Course 21 can be taken only by those who receive special permission.

EITHER FIRST OR SECOND SEMESTER.

4. Quantitative Analysis. Beginning course. Recitations and laboratory work. *Seven hours.* Professor E. D. CAMPBELL.
Course 4 is open to those who have taken Course 1.
5. Advanced Quantitative Analysis. Laboratory work. *Five hours.* Professor E. D. CAMPBELL.
Course 5 is open to those who have taken Course 4 and who receive special permission.
6. Iron and Steel Analysis. Laboratory work. *Five hours.* Professor E. D. CAMPBELL.
Course 6 is open to those who have taken Course 4 and who receive special permission. It cannot be taken at the same time with Course 5.
7. Special Methods in Iron and Steel Analysis. Continuation of Course 6. Laboratory work. *Five hours.* Professor E. D. CAMPBELL.
Course 7 must be preceded by Course 6.
11. Organic Preparations. Laboratory work. *Two hours.* Dr. GOMBERG and Mr. TROWBRIDGE.
Course 11 must be preceded or accompanied by Course 10.
- 11a. Organic Preparations. Laboratory work, continuation of Course 11. *Two hours.* Dr. GOMBERG and Mr. TROWBRIDGE.
12. Organic Preparations and Ultimate Analysis. Laboratory work. *Five hours.* Dr. GOMBERG and Mr. TROWBRIDGE.
Course 12 must be preceded by Course 4, and be preceded or accompanied by Course 10.
13. Synthetical Organic Chemistry. Laboratory work, continuation of Course 12. *Five hours.* Dr. GOMBERG.
17. Original Investigations in Organic Chemistry. Laboratory work, reading, and seminary studies. *Five hours.* Professor PRESCOTT.
18. Original Investigation. Continuation of Course 17. *Five hours.* Professor PRESCOTT.
Courses 17 and 18 must be preceded by Courses 1, 4, 10, and 11 or 12.
19. Organic Synthesis. Laboratory and library work with seminary studies. *Three hours.* Professor PRESCOTT and Dr. GOMBERG.
- 19a. Organic Synthesis. Continuation of Course 19. *Three hours.* Professor PRESCOTT.
Courses 19 and 19a should be preceded by Courses 1, 10, and 11 or 12.
22. Original Investigations in Qualitative Analysis and Applied Chemistry. Laboratory work. *Five hours.* Professor JOHNSON.

23. Original Investigations in Qualitative Analysis and Applied Chemistry. Laboratory work. *Three hours.* Professor JOHNSON.
Courses 22 and 23 must be preceded by Courses 1 and 4.
24. Original Investigations in Quantitative Analysis and its Applications. Laboratory work and reading. *Five hours.* Professor E. D. CAMPBELL.
25. Original Investigations in Quantitative Analysis and its Applications. Laboratory work and reading. *Three hours.* Professor E. D. CAMPBELL.
Courses 24 and 25 are open only to those who have special permission.
26. Bibliography of Quantitative Analysis. Reading and seminary work. *One hour.* Professor E. D. CAMPBELL.
27. Bibliography of Quantitative Analysis. Reading and seminary work. *Two hours.* Professor E. D. CAMPBELL.
Courses 26 and 27 must be preceded or accompanied by one of the following courses: 5, 6, 7, 9, 24, or 25.

SECOND SEMESTER.

1. Qualitative Analysis. Recitations and laboratory work. *Ten hours.* Professor JOHNSON.
Course 1 must be preceded by a course in general chemistry.
2. Advanced Qualitative Analysis. Continuation of Course 1, with original work. Recitations and laboratory work. *Five hours.* Professor JOHNSON.
Course 2 must be preceded or accompanied by Course 4.
3. First Steps in Qualitative Analysis. Recitations and laboratory work. *Five hours.* Professor JOHNSON.
Course 3 is a short course, designed for students of civil and of mechanical engineering.
14. Organic Analysis. Lectures and laboratory work. *Five hours.* Dr. GOMBERG.
Course 14 is open to those who have taken Courses 1 or 3, and 4 or 10.
16. Manufacture and Purification of Chemicals. Laboratory work. *Four hours.* Professor JOHNSON.
Course 16 is open to those who have completed Courses 1 and 2
28. Organic Chemistry. Lectures. *Four hours.* Professor PRESCOTT.
Course 28 must be preceded by a course in general chemistry, and be preceded or accompanied by a course in analytical chemistry.
30. Organic Chemistry. Lectures and laboratory work in organic preparations. *Four hours.* Mr. TROWBRIDGE.

METALLURGY.

FIRST SEMESTER.

2. Micro-Metallography. The study of the microscopic structure of metals as related to their physical and chemical properties. Laboratory work with reading. *One hour.* Professor E. D. CAMPBELL.

Course 2 can be taken only by those who have taken Course 1 in metallurgy, and have received special permission.

SECOND SEMESTER.

1. Fuel and Refractory Material, Iron and Steel. *Three hours.* Professor E. D. CAMPBELL.

Course 1 must be preceded by Course 1 or Course 3 in analytical chemistry, or by Course 1 in general chemistry.

HYGIENE AND PHYSIOLOGICAL CHEMISTRY.

FIRST SEMESTER.

1. Hygiene. Lectures. *Three hours.* Professor VAUGHAN.
2. Bacteriology. Lectures. *Three hours.* Professor NOVY.

EITHER FIRST OR SECOND SEMESTER.

3. Bacteriology. Laboratory work, *daily for three months*, beginning the first week in October, January, and April. *Five hours.* Professor NOVY.

Course 3 is designed especially for students who propose to study medicine and is not open to other students except by special permission.

4. Methods of Hygiene. Analyses of water, air, soil, milk, butter, etc. Laboratory work. *Seven hours.* Professor NOVY.

Course 4 is open to those who have taken Course 1 or Course 3 in analytical chemistry.

5. Methods of Hygiene. Continuation of Course 4. *Seven hours.* Professor NOVY.

6. Physiological Chemistry. Lectures. *Three hours.* Professor VAUGHAN.

7. Physiological Chemistry, including Analysis of Urine. Lectures and laboratory work. *Seven hours.* Professor NOVY.

Course 7 is open to those who have taken Course 1 or Course 3 in analytical chemistry and Course 10 in organic chemistry.

8. Advanced Physiological Chemistry. Laboratory work and reading. *Seven hours.* Professor NOVY.

9. **Original Research on the Causation of Disease.** Laboratory work and reading. *Five hours.* Professor VAUGHAN.
Course 9 is designed for advanced students and is open only to such as receive special permission.
10. **Original Research on the Causation of Disease.** Continuation of Course 9. *Five hours.* Professor VAUGHAN.

SECOND SEMESTER.

- 1a. **Hygiene.** Lectures. Continuation of Course 1. *Two hours.* Professor VAUGHAN.

ASTRONOMY.

A knowledge of logarithms and of spherical trigonometry is required for all courses in astronomy except 1 and 2. In Course 3, however, a short review of spherical trigonometry is given.

FIRST SEMESTER.

1. **General Astronomy.** *Three hours.* Professor HALL.
Course 1 requires a knowledge of plane trigonometry. Students who have passed in astronomy for entrance will receive only two hours' credit for this course.
3. **Spherical Astronomy,** including Transformation of Coordinates, Precession, Nutation, Aberration, Refraction, Parallax. *Three hours.* Professor HALL.
Course 3 must be preceded by Course 1 or its equivalent. A knowledge of calculus is also required.
5. **Practical Exercises in Computing, Interpolation, Mechanical Quadratures, Method of Least Squares.** *Three hours.* Mr. GILLIS.
Course 5 requires a knowledge of the integral calculus.
6. **Theory and Computation of Parabolic Orbits. Correction of Orbits.** *Five hours.* Professor HALL.
Course 6 should be preceded by Course 16 in mathematics.

EITHER FIRST OR SECOND SEMESTER.

2. **Elementary Practical Course.** *One hour.* Mr. GILLIS.
Course 2 requires a knowledge of trigonometry and general astronomy.
4. **Practical Astronomy.** Use of portable transit and of sextant. *Three hours.* Mr. GILLIS.
Course 4 requires a knowledge of differential and integral calculus.
9. **Extended Practical Course.** *Credit arranged with instructors.* Professor HALL and Mr. GILLIS.
Course 9 is open only to such students as receive special permission.

SECOND SEMESTER.

7. Theory and Computation of Elliptic Orbits. Theory of Special Perturbations. *Five hours.* Professor HALL.
Course 7 should be preceded by Course 16 in mathematics.
8. Spherical Astronomy. Continuation of Course 3, including Theory and Computation of Eclipses and Theory of Instruments. *Three hours.* Professor HALL.
10. History of Astronomy. *One hour.* Mr. GILLIS.
11. Mathematical Theories of Planetary Motions. *Three hours.* Professor HALL.

MINERALOGY.

FIRST SEMESTER.

1. Short Course. Lectures and practice. *Two hours.* Professor PETTEE.
For Course 1 an elementary knowledge of chemistry is desirable. It is also given in the second semester.
3. Advanced work along such lines as may be agreed upon. *Credit arranged with instructor.* Professor PETTEE.
Course 3 must be preceded by Course 1 or by Course 2.
4. Determinative Mineralogy, including blowpipe analysis. Laboratory work. *Two hours.* Professor PETTEE.
Course 4 must be preceded by Course 1 or Course 2. It requires a knowledge of the elements of analytical chemistry. It is also given in the second semester.

SECOND SEMESTER.

1. Short Course. Lectures and practice. *Two hours.* Professor PETTEE.
For Course 1 an elementary knowledge of chemistry is desirable. It is also given in the first semester.
2. Mineralogy and Lithology. Lectures and practice. *Five hours.* Professor PETTEE.
Course 2 is open only to those who are taking, or have taken, a course in analytical chemistry.
- 3a. Advanced work along such lines as may be agreed upon. *Credit arranged with instructor.* Professor PETTEE.
Course 3a must be preceded by Course 1 or by Course 2.
4. Determinative Mineralogy, including blowpipe analysis. Laboratory work. *Two hours.* Professor PETTEE.
See note to Course 4 in first semester.

GEOLOGY.

Courses 1 and 2 are intended primarily for undergraduates. Courses 3, 4, 5, 6 are for graduate students and undergraduates who have had sufficient preparation to pursue them with advantage. Special courses will be arranged for graduates by either Professor PETTEE or Professor RUSSELL.

FIRST SEMESTER.

1. Elements of Geology. Dynamical and structural geology. Lectures and recitations. *Three hours.* Professor RUSSELL.
3. General Palæontology. Invertebrates. Reading, lectures, and laboratory work. *Three hours.* Professor RUSSELL.
Course 3 requires a knowledge of the elements of general geology.
5. Physical Geology. Lectures and studies of special subjects. *Two hours.* Professor RUSSELL.
Course 5 must be preceded by Courses 1 and 2, or an equivalent.
7. Physical Geography. Lectures and conferences on the origin and life-histories of the physical features of the United States. Lantern illustrations. Reviews of works of geography and travel. *Three hours.* Professor RUSSELL.
8. Economic Geology. *Two hours.* Professor PETTEE.
Course 8 must be preceded by Course 2 in mineralogy.
9. [Geology of the United States, *Two hours.* Professor PETTEE.
Course 9 is omitted in 1895-96.]

SECOND SEMESTER.

2. Elements of Geology. Historical geology. Lectures and recitations. *Three hours.* Professor RUSSELL.
4. Geological Biology. Laboratory work, reading, conferences, and recitations. *Three hours.* Professor RUSSELL.
Course 4 must be preceded by Course 2.
6. Physical and Glacial Geology. *Two hours.* Professor RUSSELL.
Course 6 must be preceded by Course 5.
10. Physical Geography continued. Lectures and conferences on the relations of geography and climate, distribution of plants and animals, development of man, etc. Lantern views. Reviews of works of geography and travel. *Three hours.* Professor RUSSELL.

GENERAL BIOLOGY.

FIRST SEMESTER.

1. Elements of Biology. A study of typical species of plants and animals, with reference to structure, function, development, and relationship. Lectures and laboratory work. *Five hours.* Assistant Professor WORCESTER and Mr. JOHNSON.

SECOND SEMESTER.

2. **Elements of Biology.** Continuation of Course 1. Lectures and laboratory work. *Five hours.* Assistant Professor WORCESTER and Mr. JOHNSON.

Course 2 must be preceded by Course 1. See note to Course 1 in animal morphology (see page 97), and to Course 2 in botany (see page 100).

SYSTEMATIC ZOOLOGY.

FIRST SEMESTER.

1. [The Evolution of Species and their Geographical Distribution. Illustrated lectures. *Three hours.* Professor REIGHARD.
Course 1 is omitted in 1895-96, but it or an equivalent course may be expected in 1896-97.]
3. **Study of Special Groups.** Students desiring to carry on systematic work on special groups represented in the University Museum, are given every opportunity to do so, but must first satisfy the instructors in charge of their fitness to pursue the work. *Credit arranged with instructors.* Assistant Professor WORCESTER and Dr. LILLIE.

SECOND SEMESTER.

2. **The Evolution of Species.** A historical and critical account of current theories, serving as an introduction to zoology. Illustrated lectures. *Two hours.* Professor REIGHARD.
4. **Continuation of Course 3.** *Credit arranged with instructors.* Assistant Professor WORCESTER and Dr. LILLIE.
5. **Field Club.** Field excursions and laboratory work, with occasional lectures. The work consists of the careful collection, identification, preservation, and study of specimens of the local fauna. *Three hours.* Dr. LILLIE.

ANIMAL MORPHOLOGY.

After Course 1 in general biology, the student should take Course 2 in general biology or Course 1 in animal morphology. Course 11 may accompany either of the latter courses; then either 2 and 3, or 4 and 5, or 6 and 7, or 10, or all of them; after 4 and 5, 9 and 8, and finally 12, 13, 14, and 15. Courses 1 and 11, and the introductory courses in general biology are intended primarily for undergraduates; Courses 2, 3, 4, 5, 6, 7, 8, 9, 10, and 15, are for graduates and undergraduates; Courses 12, 13, 14, 17, and 19, are primarily for graduates and undergraduates on the university system.

FIRST SEMESTER.

2. **Morphology of Invertebrates.** Lectures and laboratory work. The work embraces a series of forms not included in the courses in general biology. *Four hours.* Dr. LILLIE.
4. **Mammalian Anatomy.** Dissection of the cat. Bones, abdominal and thoracic viscera, central nervous system, and sense organs. Laboratory work, lectures, and quizzes. In the laboratory work the class uses type-written copies of a descriptive anatomy of the cat prepared by Professor REIGHARD. *Five hours.* Mr. LEWIS.
6. **Vertebrate Histology.** Lectures and laboratory work, with instruction in methods. *Five hours.* Assistant Professor HUBER.
Course 6 must be preceded or accompanied by Courses 1 and 2 in general biology or by Course 1 in general biology and Course 1 in animal morphology.
9. **Comparative Embryology of Vertebrates.** Lectures and laboratory work on fish (*Coregonus*), amphibian (*Amblystoma*), the chick, and the rabbit. *Five hours.* Professor REIGHARD.
Course 9 is most advantageously taken after Courses 4 and 5, but may follow directly after Courses 1 and 2 in general biology.
10. **Physiological Morphology.** Lectures. The lectures include a review of the most important work on cell-lineage, as well as the results of recent experimental embryology and morphology. *One hour.* Dr. LILLIE.
Course 10 is open to students who have completed at least eight hours of work in animal morphology.
12. **Current Literature of Animal Morphology.** The instructors and advanced students form a journal club which holds weekly meetings. Reports are made on important current papers and are followed by informal discussion. Although the meetings are open to all, the membership is restricted. *One hour.* Professor REIGHARD.
14. **Original Work in Animal Morphology, Invertebrate Morphology, and Vertebrate Comparative Anatomy, Embryology, and Histology.** This course may be elected as 14a, *two hours*; 14b, *three hours*; 14c, *five hours*; 14d, *ten hours*; or 14e, *fifteen hours*. Professor REIGHARD.

SECOND SEMESTER.

1. **Elements of Biology of Animals.** A study of typical species with reference to structure, function, development, and relationship. Lectures and laboratory work. *Three hours.* Assistant Professor WORCESTER.

Course 1 is equivalent to the zoological part of Course 2 in general biology.

3. Morphology of Invertebrates. Continuation of Course 2. *Three hours.* Dr. LILLIE.
5. Mammalian Anatomy. Continuation of Course 4. Dissection of the cat. The bones with special reference to muscular attachments, muscles, peripheral nerves, and blood vessels. *Five hours.* Mr. LEWIS.
7. Vertebrate Histology. Laboratory work and lectures. *Five hours.* Assistant Professor HUBER.
Course 7 covers the same ground as Course 6.
8. Comparative Anatomy of Vertebrates. Lectures and laboratory work. Laboratory work on selected forms (Amphioxus, Petromyzon, Raja, Perca, Amblystoma, Alligator, Columba), is carried on by means of type-written directions. *Five hours.* Professor REIGHARD.
11. The Structure and Development of a Typical Vertebrate (the frog). Laboratory work, with weekly lectures or quizzes. *Three hours.* Assistant Professor WORCESTER.

Course 11 is intended to supplement the zoological part of Course 2 in general biology. It must be preceded or accompanied by Course 2 in general biology or by Course 1 in animal morphology.

13. Current Literature of Animal Morphology. Continuation of Course 12. *One hour.* Professor REIGHARD.
Course 13 has the same restrictions as Course 12.
15. Original Work in Animal Morphology. Continuation of Course 14. This course may be elected as 15a, *two hours*; 15b, *three hours*; 15c, *five hours*; 15d, *ten hours*; or 15e, *fifteen hours*. Professor REIGHARD.
17. Methods of Vertebrate Histology. Laboratory work with reading. *Two hours.* Assistant Professor HUBER.
19. The Microscopic Anatomy of the Brain and Special Sense Organs of Vertebrates (especially Man). Laboratory work. *Five hours.* Assistant Professor HUBER.
Courses 17 and 19 must be preceded by Course 6 or Course 7. Course 19 should also be preceded by a course in embryology, but this is not a requirement.

HUMAN ANATOMY.

No courses in human anatomy are given in this department of the University; but students who intend to pursue the study of medicine after receiving a bachelor's degree, may elect courses in human anatomy in

the Department of Medicine and Surgery, and receive credit therefor towards the bachelor's degree, provided they receive special permission from the deans of the two departments. The courses offered are as follows:

FIRST SEMESTER.

1. Osteology. Lectures and demonstrations. *Two hours.* Dr. YUTZY.
2. Descriptive Anatomy. Lectures. *Two hours.* Professor McMURRICH.
4. Anatomy of Nervous System. Lectures. *Two hours.* Professor McMURRICH.

It is desirable that Course 4 should be preceded by Courses 2 and 3.

EITHER FIRST OR SECOND SEMESTER.

5. Practical Anatomy. Laboratory work. *Four hours.* Professor McMURRICH, Assistant Professor W. A. CAMPBELL, and Dr. YUTZY.
6. Practical Anatomy. Laboratory work. *Four hours.* Professor McMURRICH, Assistant Professor W. A. CAMPBELL, and Dr. YUTZY.

Courses 5 and 6 are both required in order to complete the laboratory work in human anatomy. Classes are formed three times a year, and each course requires the attendance of the student every day for twelve weeks.

SECOND SEMESTER.

3. Descriptive Anatomy. Continuation of Course 2. Lectures. *Two hours.* Professor McMURRICH.

BOTANY.

As introductory to the work in botany, all students are required to take a semester, and are advised to take a year, in general biology.

The two courses in general biology (page 95) and Courses 2 and 8 in botany are intended primarily for undergraduates; Courses 1, 3, 4, 6, and 10 are for graduates and undergraduates; Courses 5, 7, 9, 11, 12, and 14 are primarily for graduates, but undergraduates may be admitted to them by special permission.

FIRST SEMESTER.

1. Morphology and Classification of Algae. Lectures and laboratory work on forms not included in the courses in general biology. *Three hours.* Mr. JOHNSON.

3. Cell Morphology and Physiology. Lectures and laboratory work. *Five hours.* Assistant Professor NEWCOMBE.
5. Morphology and Physiology of Fungi. Lectures and laboratory work. This course may be elected as *5a, three hours;* or *5b, five hours.* Professor SPALDING.
7. Investigations in Cryptogamic Botany. This course may be elected as *7a, three hours;* *7b, five hours;* or *7c, eight hours.* Professor SPALDING and Mr. JOHNSON.
9. Investigations in Morphology and Physiology. This course may be elected as *9a, three hours;* *9b, five hours;* or *9c, eight hours.* Professor SPALDING and Assistant Professor NEWCOMBE.
11. Current Literature of Botany. *One hour.* Professor SPALDING.
Course 11 constitutes a journal club, meeting once a week, in which important current papers on botany are reviewed and discussed by the instructors and advanced students. All students are admitted to the meetings, but only advanced students may elect the course.

SECOND SEMESTER.

2. Elements of the Biology of Plants. Lectures and laboratory work. *Three hours.* Mr. JOHNSON.
Course 2 is equivalent to the botanical part of Course 2 in general biology.
4. Morphology and Physiology of Fungi. Continuation of Course 3. As far as possible living material is employed, and special attention is given to methods of artificial culture. Lectures, laboratory and field work, and reading. *Five hours.* Mr. JOHNSON.
6. Experimental Physiology. Lectures and laboratory work. This course may be elected as *6a, three hours;* or *6b, five hours.* Assistant Professor NEWCOMBE.
8. Elements of Structural Botany. Special attention is given to the microscopic structure of crude drugs and food substances, and to the detection of adulterations. Lectures and laboratory work. *Three hours.* Assistant Professor NEWCOMBE.
Course 8 is arranged primarily for students in the School of Pharmacy, and may be elected by those who propose to enter that School.
10. General Morphology of Plants. Lectures on the history, theories, and problems of plant morphology, accompanied by the study of representative groups. *Three hours.* Professor SPALDING.
12. Investigations in Cryptogamic Botany. This course may be elected as *12a, three hours;* *12b, five hours;* or *12c, eight hours.* Professor SPALDING and Mr. JOHNSON.

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14. Investigations in Morphology and Physiology. This course may be elected as 14a, *three hours*; 14b, *five hours*; or 14c, *eight hours*. Professor SPALDING and Assistant Professor NEWCOMBE.
 16. Current Literature of Botany. Continuation of Course 11. *One hour*. Professor SPALDING.
- For a description of Course 16, see note to Course 11 in first semester.

PHYSIOLOGY

The courses in physiology are arranged for those who intend to become physicians or dentists, those who contemplate making biology or psychology a specialty, and those who propose to teach physiology.

Instruction is given by lectures, recitations, informal discussions, and laboratory work. In the laboratory the student learns to use the apparatus and methods employed in ordinary physiological experiments. Advanced students are given an opportunity to begin research work.

Students are advised to precede work in physiology by the following courses or their equivalents, viz.: Courses 4 and 5 in animal morphology, or a course in descriptive and practical human anatomy, and lectures and laboratory work in vertebrate histology in the Department of Medicine and Surgery, Courses 1 and 2 in physics, Courses 1, 2, and 4 in general chemistry and Course 10 in organic chemistry.

FIRST SEMESTER.

1. Lectures and Recitations. *Five hours*. Professor LOMBARD.

SECOND SEMESTER.

2. Continuation of Course 1. Lectures and recitations. *Five hours*. Professor LOMBARD.
3. Laboratory Work. *Two hours*. Professor LOMBARD.
Course 3 is open only to students who have taken or are taking Course 2.
4. Physiological Experimentation. Teacher's course. *One hour*. Professor LOMBARD.
Course 4 is open only to those who have taken Course 3.
5. Physiological Experimentation. Research work. *Two hours*. Professor LOMBARD.

DRAWING.

The most of the courses in drawing are arranged primarily for students in the Department of Engineering. Further information in regard to them is given in the chapter on that department (page 138).

FIRST SEMESTER.

1. Elementary Drawing. Practice. Three sections. *Two hours*. Mr. WRENTMORE and Mr. GOULDING.

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3. Mechanical Drawing. Text-book and practice. *Three hours.* Professor DENISON.
4. Free-hand Drawing; Pen and Ink Drawing; Sketching. *Three hours.* Professor DENISON or Miss HUNT.
9. Sketching of Parts of Machines; Lettering. *Three hours.* Professor DENISON or Mr. WRENTMORE.
10. Continuation of Course 8. *Two hours.* Professor DENISON or Miss HUNT.
Course 10 must be preceded by Courses 4 and 8. The section is limited in number.
13. Water-Color Drawing. *Three hours.* Professor DENISON or Miss HUNT.
Courses 13 must be preceded by Course 8. It can be taken only by special permission.

SECOND SEMESTER.

5. Descriptive Geometry. Recitations and drawing. Five sections *Three hours.* Professor DENISON, Mr. WRENTMORE, and Mr. GOULDING.
Course 5 must be preceded by Course 1.
6. Shades, Shadows, and Perspective. *Three hours.* Professor DENISON.
Course 6 must be preceded by Course 5.
7. Free-Hand Drawing (advanced). *Three hours.* Professor DENISON or Miss HUNT.
In Course 7 the section is limited in number.
8. Architectural and Water-Color Drawing. *Two hours.* Professor DENISON or Miss HUNT.
Course 8 must be preceded by Course 1 or 4. The section is limited in number.
14. Stereotomy. *Two hours.* Professor DENISON.
Course 14 must be preceded by Course 5.

SURVEYING, CIVIL ENGINEERING, MECHANICAL ENGINEERING, MARINE ENGINEERING, AND MINING ENGINEERING.

The courses in these subjects are open on certain conditions to students of the Department of Literature, Science, and the Arts, but they are arranged primarily for students in the Department of Engineering, and will be found described in the chapter on that department (pages 140 to 143).

COURSES PREPARATORY TO PROFESSIONAL STUDY.

In some of the subjects taught in this department of the University, the instruction is practically identical with that given in the professional schools. A student in this department, therefore, by making a proper choice of electives, may qualify himself for advanced standing in professional study. For information in regard to the requirements for advanced standing in each case, students are referred to the Announcements of the several departments * If a student in this department wishes to arrange his work in such a way as, after receiving his Bachelor's degree, to secure admission to the third year in medicine, he must make his intention known to the President as early as the beginning of his last year of undergraduate work and obtain special permission to be registered also as a student in medicine.

REQUIREMENTS FOR GRADUATION.

THE BACHELORS' DEGREES.

[For the Higher Degrees, see the chapter on the Graduate School, page 119].

Different lines of study lead to the degrees of Bachelor of Arts, Bachelor of Philosophy, Bachelor of Science, and Bachelor of Letters. The degree of Bachelor of Science is given on the completion of a course in general science, a course in which chemistry is the principal subject of study, or a course in which prominence is given to biology. The several degrees may be earned either on the credit system, or on the university system. A description of the latter is given on page 108. The requirements for graduation on the credit system are as follows:

GRADUATION ON THE CREDIT SYSTEM.

On the credit system, the Faculty recommend for graduation students who have secured a stated number of *Hours of Credit*, according to the requirements specified below,—a part of the subjects being prescribed and a part being chosen by the student. An *Hour of Credit* is ordinarily given for the satisfactory completion of work equiva-

* Compare page 152.

lent to one exercise a week during one semester, whether in recitations, laboratory work, or lectures. Lectures and recitations are usually one hour in length; but in courses of study that involve laboratory work, drawing, or other practical exercises, a longer attendance than one hour at an exercise is required in order to secure an hour of credit.

The courses enumerated are more fully described in the section on Courses of Instruction, pages 57 to 102.

THE DEGREE OF BACHELOR OF ARTS.

To obtain the recommendation of the Faculty for the degree of Bachelor of Arts, the student must secure *one hundred and twenty Hours of Credit*. The prescribed portion of this work is as follows:

In Greek: Courses 1, 2, 3, 4, and either 5a or 5b.

In Latin: Courses 1, 2, 3, 4.

In French: Courses 1, 2.

In English: Courses 1, 2.

In Philosophy: Course 1 or Course 2.

In Mathematics: Courses 1a, 2a, 3a, 4a.*

But after a student has completed Courses 1, 2, 3 in Greek, 1, 2 in Latin, and 1a, 2a, or an equivalent, in mathematics, he may, at his option, discontinue the study of any one of these three subjects. From the other courses offered he must choose and complete enough to secure n all *one hundred and twenty Hours of Credit*.

THE DEGREE OF BACHELOR OF PHILOSOPHY.

To obtain the recommendation of the Faculty for the degree of Bachelor of Philosophy, the student must secure *one hundred and twenty Hours of Credit*. The prescribed portion of this work is as follows:

In Latin: Courses 1, 2, 3, 4.

In French: (a) for those who entered *without* French, sixteen hours, including Courses 1, 2;

or (b) for those who entered *with* French, eight hours of advanced work.

In German: (a) for those who entered *without* German, sixteen hours, including Course 1 and options in Courses 2, 3, 4;

or (b) for those who entered *with* German, eight hours taken from options in Courses 3, 4.

In English: Courses 1, 2.

* Instead of these courses the student is permitted to take other courses in mathematics of equivalent amount.

In Philosophy: Course 1 or Course 2.

In Mathematics: Courses 1a, 2a, 3a, 4a.*

But after a student has completed Courses 1, 2 in Latin, 1a, 2a, or an equivalent, in mathematics, and eight hours in German (if he entered without German) or Courses 1 and 2 in French (if he entered without French), he may, at his option, discontinue the study of Latin, or mathematics, or the modern language (French or German) which he began in the University. From the other courses offered he must choose and complete enough to secure in all *one hundred and twenty Hours of Credit*.

THE DEGREE OF BACHELOR OF SCIENCE.

To obtain the recommendation of the Faculty for the degree of Bachelor of Science, the student must complete one of the three following sets of requirements:

I. IN GENERAL SCIENCE.

To obtain the recommendation of the Faculty for the degree of Bachelor of Science, for a Course in General Science, the student must secure *one hundred and twenty Hours of Credit*. The prescribed portion of this work is as follows:

In French: (a) for those who entered *without* French, sixteen hours, including Courses 1, 2; or (b) for those who entered *with* French, eight hours of advanced work.

In German: (a) for those who entered *without* German, sixteen hours, including Course 1 and options in Courses 2, 3, 4; or (b) for those who entered *with* German, eight hours, taken from options in Courses 3, 4.

In English: Courses 1, 2.

In Philosophy: Course 1 or Course 2.

In Mathematics: Courses 1a, 2a, or an equivalent.

In Physics: Course 1.

In General Chemistry: Courses 1, 4.

In Zoology, in Botany, or in General Biology: five hours.

In Physical or Biological Sciences: twenty-five hours additional.

From the other courses offered the student must choose and complete enough to secure in all *one hundred and twenty Hours of Credit*.

II. IN CHEMISTRY.

To obtain the recommendation of the Faculty for the degree of Bachelor of Science, for a Course in Chemistry, the student must secure *one*

* Instead of these courses the student is permitted to take other courses in mathematics of equivalent amount.

hundred and twenty Hours of Credit. The prescribed portion of this work is as follows:

- In French: (a) for those who entered *without* French, Courses 1, 2, 4; or (b) for those who entered *with* French, Course 4.
- In German: (a) for those who entered *without* German, eight hours, including Course 1 and one option in Course 2; or (b) for those who entered *with* German, five hours, taken from options in Courses 3, 4.
- In English: Course 1.
- In Mathematics: Courses 1a, 2a.
- In Physics: Course 1.
- In General Chemistry: Courses 1, 4.
- In General Chemistry: Course 7; or in Analytical Chemistry: Course 17, 22, or 24.
- In Analytical and Organic Chemistry: Courses 1, 4, 10, 11.
- In Chemistry: twenty-five hours additional.
- In Mineralogy: Course 2.
- In Geology: Courses 1, 9.
- In Drawing: Course 3 or Course 4.

From the other courses offered the student must choose and complete enough to secure in all *one hundred and twenty Hours of Credit.*

In the foregoing set of requirements the prescribed studies are so apportioned with those under limited election as to include the studies indispensable to every chemist, together with an extent of chemical training sufficient for independent action, while not unduly restricting chemical specialties. By making proper choice of electives, the student may prepare himself for any desired service in chemistry, whether for teaching and research, for some branch of technology and the related investigations, or for duty as an analyst at large. For higher chemical teaching and research, however, graduate studies should be taken in addition to those required for the bachelor's degree.

A register of graduates and other former students engaged as chemists and teachers of chemistry, has been published, and copies can be obtained by addressing the Director of the Chemical Laboratory.

III. IN BIOLOGY.

To obtain the recommendation of the Faculty for the degree of Bachelor of Science, for a Course in Biology, the student must secure *one hundred and twenty Hours of Credit.* The prescribed portion of this work is as follows:

- In French: (a) for those who entered *without* French, eight hours; or (b) for those who entered *with* French, four hours.

In German: (a) for those who entered *without* German, eight hours;
or (b) for those who entered *with* German, four hours.

In English: Course 1.

In Philosophy: Course 1 or Course 2.

In Mathematics: Courses 1a, 2a.

In Physics: Course 1.

In General Chemistry: Course 1.

In General Biology: Courses 1, 2.

In Biological Work: twenty-five hours additional.

From the other courses offered the student must choose and complete enough to secure in all *one hundred and twenty Hours of Credit*.

In the foregoing set of requirements provision is made for students who wish to devote their time largely to biological work, either as a preparation for the study of medicine,* or with a view to teaching or engaging in biological research. Zoology, botany, and physiology are the most prominent subjects of the course, but full opportunity is given for extended work in physics, chemistry, palæontology, and other sciences. The laboratories of the University are provided with the necessary facilities not only for ordinary biological work, but for somewhat extended research, and every encouragement is given to qualified students to devote themselves to original investigations.

Candidates for this degree are strongly recommended to devote as much time as practicable in the early part of their course to the modern languages, mathematics, and the physical sciences. It is expected that they will arrange their work, not only in biology, but in other subjects, in accordance with a definite plan fixed after conference with the instructors in charge.

THE DEGREE OF BACHELOR OF LETTERS.

To obtain the recommendation of the Faculty for the degree of Bachelor of Letters, the student must secure *one hundred and twenty Hours of Credit*. The prescribed portion of this work is as follows:

In French: sixteen hours, including Courses 1, 2.

In German: sixteen hours, including Course 1 and options in Courses 2, 3, 4.

In English: Courses 1, 2, 3, 4.

In History: Courses 1, 2.

In Philosophy: Course 1 or Course 2.

In Mathematics: Course 1a.

But after a student has completed Courses 1, 2 in French and eight hours in German, he may, at his option, discontinue either of these two

* See chapter on the Department of Medicine and Surgery, page 153.

subjects. From the other courses offered he must choose and complete enough to secure in all *one hundred and twenty Hours of Credit*.

GRADUATION ON THE UNIVERSITY SYSTEM.

1. The privileges of the university system are open to undergraduates who have completed their second year of residence, and have also secured at least sixty Hours of Credit, including all the prescribed work that can be taken in the first two years for some one of the Bachelors' degrees.

2. Before beginning his work each undergraduate student must make application to the Registrar, and receive from him a certificate that he is entitled to enter upon the work. This application must be made before the student enters on the work of his third year of collegiate residence. In cases of exceptional character, however, the Faculty may grant permission to begin work on this system at a later date.

3. Students who are working on the university system are not held to the completion of a fixed number of hours of work, but are required to pursue three distinct lines of study, one *major study* and two *minor studies*, and at the close of the work, to pass a special examination on those studies. The committee in charge of any undergraduate's work may, however, at their option, accept in lieu of the final examination in a minor study, approved work, in the line of that study or germane to it, done on the credit system, equivalent to one-fourth of the amount of work remaining to be completed by the student before graduation, if he had continued on the credit system. Members of the graduating class who have not more than thirty hours of work to complete in their last year of residence, are also allowed to take, in place of one-half the amount remaining to be completed, a major study on the university system.

4. The work of students carrying on their studies on the university system is supervised by committees of the

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Faculty. The members of the committee in each case consist of the professors in charge of the student's work, the professor in charge of the major study being chairman. On making his application to the Registrar, each student is directed to the proper committee.

5. Students on the university system are subject to all the rules of the Department relating to attendance and to examinations. No student can be excused from any work that he has once entered upon, nor from any examination, without the consent of the instructor in charge of the work. Examinations passed at the close of each semester on ordinary class work do not count as an equivalent or in abatement of the final examination to be passed for a degree, except as provided above in paragraph 3.

6. Undergraduates who have been enrolled as candidates on the university system for at least three semesters, may be admitted to a special examination for a Bachelor's degree at a date not earlier than the end of three and a half years of residence at the University. Before being recommended for any Bachelor's degree, however, they must have completed all the courses prescribed for that degree. The examination will be conducted by the regular committee and such other persons as they may ask to assist them.

TEACHER'S DIPLOMA AND TEACHER'S CERTIFICATE.

The aims of the University in providing instruction in the Science and the Art of Teaching, are as follows:

1. To fit University students for the higher positions in the public school service.
2. To promote the study of educational science.
3. To teach the history of education, and of educational systems and doctrines.
4. To secure to teaching the rights, prerogatives, and advantages of a profession.
5. To give a more perfect unity to our State educational system by bringing the secondary schools into closer relations with the University.

TEACHER'S DIPLOMA.

The Teacher's Diploma is given to a student at the time of receiving a Bachelor's degree, provided he has completed three courses of study offered by the professor of the science and the art of teaching, viz., Courses 1 and 2 and some three-hour Course, and, also, at least one of the Teachers' Courses offered by other professors, and by special examination has shown such marked proficiency in the course chosen as qualifies him to give instruction. The Diploma is also given to a graduate student at the time of receiving a Master's or a Doctor's degree, provided he has pursued teaching as a major or minor study and has also taken a Teacher's Course in some other department.

TEACHER'S CERTIFICATE.

By authority of an act of the state legislature, passed in 1891, the Faculty of this Department give a Teacher's Certificate to any person who takes a Bachelor's, Master's, or Doctor's degree and also receives a Teacher's Diploma as provided above. By the terms of the act, the certificate given by the Faculty "shall serve as a legal certificate of qualification to teach in any of the schools of this State, when a copy thereof shall have been filed or recorded in the office of the legal examining officer or officers of the county, township, city, or district."

FELLOWSHIPS AND SCHOLARSHIPS.

ELISHA JONES CLASSICAL FELLOWSHIP.

In 1889 the Elisha Jones Classical Fellowship was established by Mrs. Catherine E. Jones, in memory of her husband, Professor Elisha Jones, a graduate of this University in the class of 1859, and for many years a member of the Literary Faculty. Its purpose is "to encourage patient, honest, accurate study of the languages, literature, and archaeology of ancient Greece and Rome." Its present income is \$500 a year.

A candidate for this Fellowship must have spent at least three entire semesters as a student in this Department of the University and must be a Bachelor of Arts of this University, of not more than two years' standing. Appointments to the Fellowship are made by an Examining Board, consisting of President ANGELL and Professors D'OOGHE, KELSEY, WALTER, and HUDSON. The period of incumbency is limited to two academic years, and must be spent at this University "unless at any time the examining board shall see fit to allow the second year to be spent" at some other place favorable to classical study.

The present holder of the Fellowship is Mary Gilmore Williams, A. B.

DETROIT HIGH SCHOOL SCHOLARSHIPS.

The alumni of the Detroit High School have established several scholarships open to graduates of that school. The first steps toward raising a fund for this purpose were taken in 1891; and the Detroit High School Scholarship Fund Association has been recently incorporated.* Six students now enjoy the benefit of the fund. Three of the beneficiaries of the fund received degrees at the last commencement. One of the scholarships is known as the Mary C Leete Memorial Scholarship, in memory of a teacher who recently died.

SAGINAW HIGH SCHOOL SCHOLARSHIPS.

Four scholarships, with an annual income of two hundred and fifty dollars each, established by Mr. Arthur Hill, of Saginaw, W. S., and known as the John Moore, the Wells-Stone, the Alonzo L. Bingham, and the Otto Roeser scholarships, are open to graduates of the Saginaw High School.

SCHOLARSHIP OF THE CLASS OF 1894.

The Class of 1894 has established a scholarship fund, but the proceeds of the fund are not yet available.

FELLOWSHIP IN CHEMISTRY.†

The sum of five hundred dollars has been given by Messrs. Parke, Davis and Company, of Detroit, for the support of a Fellowship in Chemistry in 1895-6.

SETH HARRISON SCHOLARSHIP FUND.

The Seth Harrison Scholarship Fund was established, in memory of her father, by Mrs. Clara Harrison Stranahan, of Brooklyn, N. Y. The principal of the fund is twenty-five thousand dollars. The income is to be used, on conditions specified in the covenant between Mrs. Stranahan and the Board of Regents, for the benefit of descendants of Seth Harrison who may be pursuing studies in the Department of Literature, Science, and the Arts, of the University of Michigan, whenever applicants properly qualified present themselves. Provision is made, how-

*The State Legislature in 1893 passed an act providing "that five or more persons of full age, residing in the State of Michigan, may associate and incorporate themselves together for the purpose of establishing scholarships in the University of Michigan, for the benefit of graduates of the high schools of this State." A corporation organized in accordance with the provisions of this act "shall be under the general management of not less than five nor more than fifteen trustees," and "shall, in law and equity, be capable of taking and receiving real and personal estate . . . not exceeding one hundred thousand dollars in the aggregate, for the purpose of its incorporation."

†There is also a Fellowship in Chemical Research in the School of Pharmacy (see page 191).

ever, for applying the income of the fund to scholarships for other persons, "if at any time there shall be a period of seven years during which there are no qualified applicants," descendants of Seth Harrison.

THE PHILLIPS SCHOLARSHIPS.

The late Henry Phillips, Jr., of Philadelphia, Pa., made provision in his will for the establishment and maintenance of six scholarships, to be known as The Phillips Scholarships, in the Department of Literature, Science, and the Arts of the University of Michigan. By the terms of the will these scholarships are to be open only to candidates for the degree of Bachelor of Arts, who excel in the Greek and Latin studies required for admission to the University; and they are to be awarded by a committee consisting of the President of the University, the Dean of the Department, the senior professor of Greek, and the senior professor of Latin.

GRAND RAPIDS HIGH SCHOOL SCHOLARSHIPS.

The High School Scholarship Association of Grand Rapids is a body incorporated under the State law, for the purpose of assisting graduates of the Grand Rapids High School to secure a college education in the Department of Literature, Science, and the Arts of the University of Michigan. Three students are receiving assistance from the Association the present year.

RULES AND REGULATIONS OF THE DEPARTMENT.

The following rules and regulations relate to admission conditions, election of studies, examinations, work in other departments, attendance, and discipline.

I. ADMISSION CONDITIONS.

All students are regarded as strictly on probation, until they have removed all conditions incurred in the examinations for admission to the Department. All such conditions must be removed during the year following the date of the examination. Students who have any admission conditions outstanding at the beginning of their second year of residence will not be allowed to join their classes until such conditions are removed.

II. ELECTION OF STUDIES.

I. The maximum number of hours a week a student may elect without special permission of the Faculty is sixteen, but a student will do well to limit himself to the fifteen hours a week necessary to complete a course in four years.

5. Any student reported as "*Not Passed*" in any course, will receive no credit for that course until he has again pursued it as a regular class exercise and has passed the regular examination in the same.

IV. RELATION TO OTHER DEPARTMENTS.

1. Candidates for a degree in this Department of the University, who wish to pursue studies in any other department, may be granted that privilege, provided they lack, at the beginning of the academic year, no more than sixteen hours of graduation and take no more than eight hours of work in any given semester in this Department in connection with the semester's work in the other department.

2. All students admitted from other departments of the University to the privileges of this Department are regarded in the class room as members of this Department, and are required to pass the regular examinations with the classes in which they are enrolled. Violations of this requirement will be deemed a forfeiture of the privileges of this Department; but this rule is not to be interpreted as applying to those who are permitted to attend lectures or other exercises without being enrolled.

V. ATTENDANCE AND DISCIPLINE.

The State of Michigan extends the privileges of the University, with only moderate charges, to all persons of either sex, who are qualified for admission. Thus it does not receive patronage, but is itself the patron of those who seek its privileges and its honors. It cannot, however, be the patron of idleness or dissipation. Its crowded classes have no room except for those who assiduously pursue the studies of their choice, and are willing to be governed in their conduct by the rules of propriety.

Students not in their places at the opening of the semester must present written excuses from their parents or guardians for the delay.

Students are not allowed to absent themselves from town without permission from the President.

Such delinquencies as tardiness, absence, deficiencies, and offences against good order, in the several departments of instruction, are ordinarily dealt with by the instructor in charge of the department in which they occur. Flagrant cases are reported to the Faculty for adjudication.

Students are suspended or dismissed, whenever in the opinion of the Faculty they are pursuing a course of conduct seriously detrimental to themselves or to the University.

The following is a By-Law of the Regents:

"Whenever any Faculty is satisfied that a student is not fulfilling, or likely to fulfil, the purpose of his residence at the University, or is for any cause an unfit member thereof, the President shall notify his parents or guardians, that they may have an opportunity to withdraw him, and if not withdrawn within a reasonable time he shall be dismissed."

b. If he is a candidate for a degree, he must at some time take all the studies "prescribed" for the degree he seeks.

c. No student will be allowed to elect merely a part of a course without special permission of the Faculty.

d. No credit will be allowed to a student for work in any course, unless the election of the work is formally made and reported to the Registrar before the work is begun.

e. After the second Monday of each semester no study can be taken up or dropped without special permission of the Faculty.

f. The Faculty will require a student to drop a part of his work at any time, if in their opinion he is undertaking too much; or to take additional work, if they think he is not sufficiently employed.

g. The Faculty reserve the right to withdraw the offer of any study not chosen by at least six persons.

IV. After matriculation a student cannot, without special permission of the Faculty, be admitted to examination in any one of the courses given, until he has received in the University the regular instruction in such course.

V. The student is urged to make his choice of studies with care, and with reference to some plan. The members of the Faculty will be ready to give advice and assistance in this regard.

VI. Students expecting to graduate in any given year must report to the Registrar at the opening of the year and ascertain what prescribed work, if any, is still lacking for the degree sought.

III. EXAMINATIONS.

1. All students of this Department, whether candidates for a degree or not, if at work on the credit system, are required to attend all the examinations in the courses of study they pursue.

2. No student absent from any regular examination in any course of study that he may have pursued, will be allowed to take such omitted examination before the next regular examination in that course. In cases of great urgency, however, the Faculty may grant students special permission to be examined at an earlier date.

3. No student whose examination in any course is reported as "*Incomplete*," will receive credit for that course until after the examination has been completed. In case, however, the examination be not completed within one year, the unfinished course will be regarded and treated as "*Not Passed*."

4. Any student reported as passed "*Conditionally*" in any course, must remove the condition within one year from the date of the examination in which it was incurred; otherwise, the course passed conditionally will be regarded and treated as "*Not Passed*."

5. Any student reported as "*Not Passed*" in any course, will receive no credit for that course until he has again pursued it as a regular class exercise and has passed the regular examination in the same.

IV. RELATION TO OTHER DEPARTMENTS.

1. Candidates for a degree in this Department of the University, who wish to pursue studies in any other department, may be granted that privilege, provided they lack, at the beginning of the academic year, no more than sixteen hours of graduation and take no more than eight hours of work in any given semester in this Department in connection with the semester's work in the other department.

2. All students admitted from other departments of the University to the privileges of this Department are regarded in the class room as members of this Department, and are required to pass the regular examinations with the classes in which they are enrolled. Violations of this requirement will be deemed a forfeiture of the privileges of this Department; but this rule is not to be interpreted as applying to those who are permitted to attend lectures or other exercises without being enrolled.

V. ATTENDANCE AND DISCIPLINE.

The State of Michigan extends the privileges of the University, with only moderate charges, to all persons of either sex, who are qualified for admission. Thus it does not receive patronage, but is itself the patron of those who seek its privileges and its honors. It cannot, however, be the patron of idleness or dissipation. Its crowded classes have no room except for those who assiduously pursue the studies of their choice, and are willing to be governed in their conduct by the rules of propriety.

Students not in their places at the opening of the semester must present written excuses from their parents or guardians for the delay.

Students are not allowed to absent themselves from town without permission from the President.

Such delinquencies as tardiness, absence, deficiencies, and offences against good order, in the several departments of instruction, are ordinarily dealt with by the instructor in charge of the department in which they occur. Flagrant cases are reported to the Faculty for adjudication.

Students are suspended or dismissed, whenever in the opinion of the Faculty they are pursuing a course of conduct seriously detrimental to themselves or to the University.

The following is a By-Law of the Regents:

"Whenever any Faculty is satisfied that a student is not fulfilling, or likely to fulfil, the purpose of his residence at the University, or is for any cause an unfit member thereof, the President shall notify his parents or guardians, that they may have an opportunity to withdraw him, and if not withdrawn within a reasonable time he shall be dismissed."

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty dollars*; for all others, *forty dollars*.

Diploma Fee.—For all alike, *ten dollars*. A fee of *one dollar* is charged for the Teacher's Diploma.

For laboratory fees and other expenses, see page 35.

*The Matriculation Fee and the Annual Fee must be paid in advance. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Graduate School.

A special Announcement of the Graduate School was issued in the summer of 1895. Copies of this Announcement can be had by addressing Mr. James H. Wade, Steward of the University.

The Graduate School was organized, in 1892, within the Department of Literature, Science, and the Arts, and its management is entrusted to an Administrative Council, chosen from the Faculty of that Department. For the year 1895-96 the Administrative Council consists of the President of the University, together with the heads of departments of instruction. The purpose of the school is to bring into greater prominence the numerous advanced courses of instruction that have been developed from the continual extension of the elective system; to secure a more efficient and systematic administration of this higher work; and to provide as far as possible for the separate instruction of graduate students.

ADMISSION AND REGISTRATION.

All applicants for admission to the Graduate School must first report to the Dean of the Department of Literature, Science, and the Arts, and present their credentials. They will then be referred to the Secretary of the Administrative Council, for the arrangement of courses of study.

The privileges of the school are open to graduates of the Department of Literature, Science, and the Arts of this University, and to graduates of other universities and colleges, who satisfy the Administrative Council that they are qualified to pursue with profit the advanced courses of study offered in the school.

Graduates of institutions, where the undergraduate courses of study are not substantially equivalent to the course prescribed at this University, will ordinarily be required to do an additional amount of undergraduate work, or to prolong their term of residence, before being admitted to full candidacy for a higher degree.

Graduates of this University, or of other institutions, who do not wish to become candidates for a degree, may be admitted and registered as special resident graduates.

Graduates of other institutions who are candidates for a bachelor's degree in the Department of Literature, Science, and the Arts, are not registered in the Graduate School.

COURSE OF INSTRUCTION.

The courses of instruction offered in the Department of Literature, Science, and the Arts, and described on pages 57 to 102, are all open to graduate students who satisfy the professor in charge that they are qualified to pursue the work to advantage. In all branches of study provision is made for the instruction of graduate students.

The work of candidates for a higher degree is not confined strictly to the courses referred to above. Each student chooses three lines of study, a major study and two minor studies, which, after approval by the Council, he pursues under the immediate supervision of a special committee, consisting of the professors in charge of the studies chosen, the professor in charge of the major study being chairman. The nature of the work prescribed, and of the committee's oversight, varies in different cases according to the subjects chosen, the degree sought, and the previous attainments of the student. The work may consist of attendance upon certain specified courses, or of reading to be done privately and reported upon, or of an original research to be carried on more or less independently. In general, the method followed is that of the so-called university system, described on page 108, with modifications as circumstances may make advisable. The essential features of this system are specialization of study, a final examination, and a thesis. A thesis is always required of a candidate for a doctor's degree and of a non-resident candidate for a master's degree; for a master's degree in residence, the requirement may be waived at the discretion of the committee in charge of the student's work. The final examination for a degree is conducted under the direction of the committee, and the result of the examination is reported to the Faculty of the Department of Literature, Science, and the Arts.

REQUIREMENTS FOR GRADUATION.

The degrees conferred on the completion of an approved course of study in the Graduate School are those of Master of Arts, Master of Philosophy, Master of Science, Master of Letters, Doctor of Philosophy, Doctor of Science, and Doctor of Letters.

THE MASTERS' DEGREES.

The Masters' degrees are open to Bachelors of Arts, Philosophy, Science, or Letters, of this University, or of any other reputable university or college. A residence of at least one year at this University is required, except as stated below.

Residents.—A student who has received a Bachelor's degree may be recommended for the corresponding Master's degree after completing the prescribed term of residence, and passing an examination on his course of study as approved by the Administrative Council. A thesis may, or may not, be included in the requirements for the degree, as the committee in charge of the student's work may determine.

A student properly qualified may be permitted to pursue at the same time studies for a Master's degree, and studies in any of the professional schools, on condition that the term of study and residence in the Graduate School be extended to cover at least two years.

Non-Residents.—A Bachelor of Arts, Bachelor of Philosophy, Bachelor of Science, or Bachelor of Letters, of this University, who has already completed a portion of the term of residence prescribed for a Master's degree, may be allowed to continue his studies for the degree without further residence at the University, on such conditions as the Administrative Council may determine in each case. *This privilege is restricted to graduates of this University.*

THE DOCTORS' DEGREES.

1. The degree of Doctor of Philosophy is open to persons that have received the degree of Bachelor of Arts, or of Bachelor of Philosophy; the degree of Doctor of Science to persons that have received the degree of Bachelor of Science; and the degree of Doctor of Letters to persons that have received the degree of Bachelor of Letters; but no student will be accepted as a candidate for the Doctor's degree who has not a knowledge of French and German sufficient for purposes of research.

2. It is not intended that the Doctors' degree shall be won merely by faithful and industrious work for a prescribed time in some assigned course of study, and no definite term of required residence can be specified. As a rule three years of graduate study will be necessary, the last

two semesters of which must be spent at this University. The period of three years, however, may be shortened in the case of students who, as undergraduates, have pursued special studies in the direction of their proposed graduate work.

3. No student will be enrolled as a candidate for a Doctor's degree until he has been in residence as a graduate student for at least one year. [This rule may be waived in the case of those who come properly accredited from a Graduate School of some other University, and of those who, as undergraduates in this University, have shown special proficiency in the line of their proposed graduate work.]

4. A student wishing to become a candidate for a Doctor's degree must make a formal application to be so enrolled at least two semesters prior to the time of presenting himself for examination.

5. A candidate for a Doctor's degree must take a major study that is substantially co-extensive with some one department of instruction in the University. He must also take two minor studies, one of which may be in the same department as the major, but involving a more thorough treatment of the same. Both minors must be cognate to the major, and all studies must be subject to the approval of the Administrative Council.

6. **THE THESIS.**—The thesis is of great importance. It must exhibit creditable literary workmanship and a good command of the resources of expression; but it must depend for acceptance more upon its subject-matter than upon its formal or rhetorical qualities. It must be an original contribution to scholarship or scientific knowledge. The inquiry should be confined within narrow bounds. The treatment should be as concise as the nature of the matter permits, and show familiarity with the history of the problem treated, with the literature bearing upon it, and with the latest methods of research applicable to it. Every thesis should contain a clear introductory statement of what it is proposed to establish or to investigate, and likewise a final resumé of results. It should also be accompanied by an index of contents and a bibliography of the subject. It is expected that the preparation of an acceptable thesis will usually require the greater part of one academic year.

SPECIAL REGULATIONS RELATING TO THE HIGHER DEGREES.

1. Applicants for an advanced degree are required to announce to the Council, through the Secretary, as early as the fifteenth of October of each year, the particular branches of study to which they wish to give special attention. The supervision of their work will then be entrusted to the proper committee.

2. The subject of the thesis for a doctor's degree must be chosen, and must be approved by the committee concerned, as early as the first of November of the college year in which the applicant expects to take

the degree; and the subject of the thesis for a master's degree, when required, must be chosen and approved as early as the first of December.

3. The thesis must be completed and put into the hands of the chairman of the proper committee as early as the first of May of the year in which the applicant expects to take the degree.

4. The thesis must be prepared for close scrutiny with reference not only to its technical merits, but also to its merits as a specimen of literary workmanship. It must be preceded by an analytical table of contents and a carefully prepared account of the authorities made use of.

5. The thesis must be read and defended in public at such time as the Council may appoint, and, in case of a Master's degree, a bound copy, either written or printed, must be deposited in the University library.

6. Candidates for the degree of Doctor of Philosophy, Doctor of Science, or Doctor of Letters, in case of the acceptance of their theses, are required to have the accepted theses printed in full or in part as may be approved by the responsible committee, and to present twenty-five copies to the University library. To guarantee the printing of the thesis, every candidate for the Doctor's degree will be required to deposit with the Treasurer of the University, between the date of the acceptance of his thesis and the time fixed for his examination, the sum of fifty dollars, which deposit will be returned to him in case of failure to pass his examination, or whenever he shall cause his thesis to be printed at his own expense, or shall have it published in a form and under auspices approved by the responsible committee.

In the printing of the thesis at his own expense, the candidate will be expected to use good substantial paper and slightly typography. A page four inches by six, with outside margins of at least one inch, is recommended.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty dollars*; for all others, *forty dollars*. The annual fee required of all graduates who are granted the privilege of pursuing studies for a master's degree *in absentia*, is *ten dollars*.

Diploma Fee.—For all alike, *ten dollars*. A fee of *one dollar* is charged for the Teacher's Diploma.

For laboratory fees and other expenses, see page 35.

* The Matriculation Fee and the Annual Fee must be paid in advance. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Department of Engineering.

While provision was made, by the legislative act under which the University was organized in 1837, for instruction in engineering, work was begun in this line in 1853, and the first degrees were conferred in 1860. The engineering courses were included in the Department of Literature, Science, and the Arts, until the close of the collegiate year 1894-95. At that time the Department of Engineering was established by the Board of Regents.

Persons who wish to become professional engineers are offered here thorough courses of study in civil, mechanical, and electrical engineering. The work extends through four years. The aim of the Department is to lay a foundation of sound theory, sufficiently broad and deep to enable its graduates to enter understandingly on the further investigation of the several specialties of the profession; and at the same time to impart such a knowledge of the usual professional practice as shall make its students useful in any position to which they may be called. While the adaptation of theory to practice can be thoroughly learned only by experience, there are many matters in which the routine work of an engineering field party, office, or drafting room can be carried out on a greater or less scale in a training school. The technical branches are under the direct care of those who have had professional experience as well as a full scientific training, and in all particulars the courses embody as close an imitation of the requirements of active labor as the instructors who have the several branches in charge can devise.

The college year extends from the first day of October to the Thursday following the last Wednesday in June.

REQUIREMENTS FOR ADMISSION.

[For admission to advanced standing, see page 125.]

[For admission of students not candidates for a degree, see page 126.]

Candidates for admission must be at least sixteen years of age, and must present satisfactory evidence of good moral character. They must bring credentials from their last instructor, or from the last institution with which they have been connected.

Unless admitted on diploma from an approved school (see page 127), any student who desires to become a candidate for a degree must pass examinations in the subjects described below. Before entering upon the examination each applicant must present his credentials to the Dean of the Department at his office in the Engineering Building.

ADMISSION OF CANDIDATES FOR A DEGREE.

The subjects on which applicants for admission to any of the courses leading to a degree in engineering will be examined are as follows:

English Language, Composition, and Rhetoric.—*Grammar.*—Selections for analysis and parsing will be set, arranged to test the applicant's knowledge of the leading facts of English Grammar. To meet this requirement, a review of the subject should be had during the last year of the preparatory course.

Composition and Rhetoric.—The purpose of the examination in composition is to test the applicant's ability to write good English. To this end he will be asked to write two essays of not less than two hundred words each, one upon a subject drawn from books he has read, and the other upon a subject drawn from his experience or observation. The language of these essays must be grammatical and clear. The spelling, punctuation, and capitalizing must be correct. The applicant must show ability to discriminate in the use of words and to construct well-organized sentences and paragraphs. A topical outline should accompany each essay. For further suggestions regarding preparation for this requirement, and for lists of books from which subjects for composition will be chosen, see pages 38 and 52.

English Literature.—Daily recitations for at least one year will be requisite. Stopford A. Brooke's Primer, or any other manual may be used for an outline of the subject. As much time as practicable should be given to the careful reading of representative authors in each period.

Mathematics.*—Algebra.—Fundamental Rules, Fractions, Simple Equations, Involution and Evolution, the Calculus of Radicals, and Quadratic Equations, as given in Olney's Complete School Algebra, or an equivalent in other authors.

Geometry.—Beman and Smith's Plane and Solid Geometry, or an equivalent in other authors.

Trigonometry.—Plane Trigonometry as given in Olney's Elements of Trigonometry, or an equivalent in other authors.

N. B.—It is very desirable that High Schools whose graduates are received on diploma arrange their courses so as to include a portion of both algebra and geometry in their last preparatory year. Students who do not come from diploma schools should take a similar review if they expect to succeed in the study of mathematics in the University.

Physics.—An amount represented by Carhart and Chute's Elements of Physics. Laboratory work in physics is urgently advised, though not required; but students who have completed a course in laboratory practice, may expect to derive advantage from it if they take work in the physical laboratory in the University (see page 85).

History.—Myers's General History, or an equivalent; and the History of the United States as far as the close of the Revolutionary War.

Chemistry, Geology, Zoology, Physiology, Physical Geography, and Astronomy.—The applicant may offer any *two* of these subjects. The requirements, intended to cover a half year's work in each subject, are as follows:

Chemistry.—Freer's Elementary Chemistry, or an equivalent amount in Remsen's Introduction to the Study of Chemistry.

Geology.—Winchell's Geological Studies.

Zoology.—Packard's Zoology, Briefer Course, or Nicholson's Manual of Zoology.

Physiology.—Martin's The Human Body, Briefer Course.

Physical Geography.—Tarr's Elementary Physical Geography, especially chapters 9 to 21 inclusive, or an equivalent.

Astronomy.—Newcomb and Holden's Astronomy, Briefer Course, Young's Elements of Astronomy, or an equivalent. A knowledge of the principal constellations is required.

French, German, or Latin.—Applicants may offer French, German, or Latin, one of these three languages being required. The requirements in each are as follows:

French.—The whole subject of French Grammar. The applicant will be expected to read at sight easy French, and to translate correctly into

* Students entering at the beginning of the second semester (February 22, 1897), should be prepared in the mathematics of the first semester in addition to the other requirements for admission.

French simple English sentences. Two years ought to be given to this study, the first year being spent on the grammar, and the second devoted to reading good modern French, accompanied by grammatical analysis and exercises in writing. The texts read should be chiefly narrative and conversational prose; modern, rather than classic, dramas should be read.

German.—(1) Ability to pronounce German correctly and to read it fluently with the proper intonations. (2) Thorough familiarity with the every-day facts of the grammar, to be evinced by putting illustrative English phrases and sentences into German. (3) Sufficient miscellaneous prose reading—say four hundred pages—so that the applicant will be able to construe at sight, and put into good English, a passage of moderately difficult German prose, either narrative or dialogue. (4) A careful study of one classical drama, Schiller's *Tell* being recommended.

Latin.—Jones's First Latin Book, or an equivalent amount in any other introductory text-book, four books of Caesar's Gallic War, and one of the orations of Cicero. It is expected that at least two years will be given to preparation in Latin.

ADMISSION TO ADVANCED STANDING.

1. Graduates of the Department of Literature, Science, and the Arts of this University, or of any other reputable college, are admitted without examination to advanced standing as candidates for a degree in engineering, and are held only to the completion of the special requirements for graduation in the several courses (see page 144). These requirements can be completed in two years. A knowledge of differential and integral calculus, of analytical mechanics, of elementary drawing, and of descriptive geometry, is needful for the advanced work.

2. Students who have completed at least one year's college work in an approved college, and who bring explicit and official certificates describing their course of study and scholarship, and testifying to their good character, will be admitted to advanced standing without examination, except such as may be necessary to determine what credit they are to receive for work done in the college from which they have come.

3. Students who have not completed at least one year's college work in an approved college, but who, previously

to entering this department of the University, have pursued studies beyond those required for admission, may be admitted to advanced standing on passing the regular entrance examinations, and examinations in such undergraduate studies as they may ask to be credited with in advance.

4. Rules relating to admission to advanced standing:
 - a. Credits must be secured before the fifteenth of December or (if the candidate be matriculated after that date) before the tenth of April.
 - b. No credits will be given for advanced standing after the dates named in (a).
 - c. An account once closed cannot be reopened without special permission of the Faculty.
 - d. All students, whether candidates for a degree or not, who apply for advanced standing on the conditions stated in paragraphs (2) and (3) above, must present to the Registrar a statement showing the amount of work done in the subjects in which credit is asked.
 - e. The application for advanced standing should be made to the Registrar immediately after matriculation; and the Registrar will furnish a blank form for presentation to the professors in charge of the several subjects named in the blank.

ADMISSION OF STUDENTS NOT CANDIDATES FOR A DEGREE.

Persons who desire to pursue studies in this department, and do not desire to become candidates for a degree, are admitted on the following conditions:

1. All persons under twenty-one years of age must pass the regular entrance examinations.
2. Persons over twenty-one years of age must show that they have a good knowledge of English and are otherwise prepared to pursue profitably the studies they may desire to take up.
3. Should a student who enters under the preceding pro-

vision (2) subsequently become a candidate for graduation, he must pass the regular entrance examinations, at least one year previous to the time when he proposes to graduate.

4. Students not candidates for a degree who wish credit for studies pursued before admission are referred to the rules relating to advanced standing given above.

5. Students not candidates for a degree are expected to attend the lectures, recitations, and examinations in the branches prescribed for the regular students, and are required to take enough work to occupy them profitably.

TIMES OF EXAMINATIONS.

An examination for admission to the Department of Engineering will be held on Saturday and Monday, June 20 and 22, 1896, and another beginning on Wednesday, September 23, and continuing through the Thursday, Friday, Saturday, and Monday following. The examinations will begin at nine o'clock A. M. of each day. Applicants may take their examinations at either of these times, or may take a part in June and a part in September. In either case it is particularly desired that they present themselves on the first day of the examination.

The days and hours of examination in the several subjects are the same as those announced for the corresponding examinations in the Department of Literature, Science, and the Arts (see pages 44 and 45).

ADMISSION ON DIPLOMA.

Students presenting graduation diplomas from any of the schools approved by the Faculty of the Department of Literature, Science, and the Arts, are admitted without further examination to the Department of Engineering. For the regulations that govern admission on diploma and the list of approved schools, see pages 45 to 50.

In addition to the schools included in the list mentioned above, those named below have been approved as qualified to prepare students for

admission on diploma to the Department of Engineering. The figures in parenthesis indicate the year in which the term of approval expires.

Chicago, Ill.: English High and Manual Training School (1897).

Manual Training School (1897).

Philadelphia, Pa.: Northeast Manual Training School (1895).

THE WORK OF THE DEPARTMENT.

The studies pursued in the earlier part of the course comprise, in *Mathematics*, algebra, trigonometry, analytic geometry, and the elements of differential and integral calculus; in *French* and *German*, an amount covering in all about a year and a half of study; in *English*, a course in higher English grammar and composition; in *Physics* and *Chemistry*, the study of the elementary principles; and in *Drawing*, practice in geometrical and in mechanical drawing, and in the study of descriptive geometry.

The more technical subjects are taken up in the latter part of the course. Some of these subjects are of equal value to all classes of engineering students, such as analytical and applied mechanics, the strength and resistance of materials, and the metallurgy of the useful metals, especially iron and steel; others are adapted more particularly to the wants of the special students in the several courses. Their general scope may be seen from the following descriptive outline.

DESCRIPTION OF COURSES.

1. Drawing.—A very complete course in mechanical drawing is given, embracing plane projection drawing, isometric drawing, descriptive geometry, and the elementary principles of coloring and shading, with original problems executed in the drawing room. Examples from numerical data are always given when suited to the conditions of the problem in hand. Students in mechanical engineering are required to sketch pieces of machinery, and afterwards to make working drawings suitable for use in the shop. The plans of surveys, plane-table work, maps, designs in engineering construction, and the thesis drawings naturally come under this head. Instruction is also given in free-hand drawing, topographical drawing, ornamentation and lettering, shades and shadows, linear perspective, and drawing for stone cutting. The work in drawing occupies the student a part of almost every day throughout the course.

2. Surveying.—The work in surveying covers one full year and includes text-book work, lectures, recitations, and field practice. The theory of instruments and all the operations of surveying, laying out work, and computing, are explained in detail, and each student is

required to make plats or maps and the necessary calculations of actual surveys. A varied and ample supply of instruments is available for use. The classes have practice in steel-tape measurements, ranging lines, measuring angles, running levels and curves of various kinds, and the measurement of earthwork; they make surveys, traverse them, calculate contents, divide areas, and, in general, perform the work of highway, street, and railroad surveying. They are given practice in every step of topographical surveying and drawing. They make surveys with the transit and stadia, plane-table, photographic camera, and other instruments; they reduce the notes, develop and finish the pictures, plot the work, and make finished drawings of all field operations. They also determine the meridian and take observations for latitude. The work is done during the fall months.

In the month of June the class is taken into the field as a railroad party for a period of four weeks continuously, where, under competent supervision, it goes through all the field work for a projected line, up to the point of actual construction, such as reconnoissance, preliminary and location survey, cross-sectioning, staking out, contouring, and topography. Plans and profiles, carefully made in the field by the students from the notes of the party, complete this portion of the subject, and serve to fix the practical application of the principles obtained from the text-books and lectures. In the above work are usually included a plane-table survey, triangulation, and some hydrography when the selected locality is favorable.

Instruction by lecture, text-book, and recitation is given, covering the special field of city engineering, and pointing out its connection with, and dependence upon, other branches of engineering work. The city engineer's duties with respect to various matters of public concern are explained. Among the subjects treated in this connection are streets and their present uses; sewers; waterworks; public franchises; assessments; bridges; building inspection; fires; and lighting. The instruction is not technical, but, as the work of the modern city engineer covers a wide field of engineering, an attempt is made to present some of the controlling relationships and to supplement and apply to this service what is taught in other parts of the course.

The principal text-books used are Johnson's Surveying, Searle's Field Engineering, and Byrne's Highway Construction. All the more important books of reference are easily accessible to the student.

3. Strength and Resistance of Materials.—A course of recitations and lectures continuing through the first half-year is devoted to this subject, and is attended by all the engineering students. The action of the different materials under applied forces, the distribution of stress, and the proper proportions to be given to the different parts of structures in

order that they may safely fulfil their several functions, are carefully studied.

4. Theory of Structures.—Roof and bridge trusses, in wood and iron; arches, in wood, iron, and stone; trestles; brick and stone masonry; foundations; tunnels; and, in general, the whole theory of structures are discussed. In this course, as in the preceding (3), Rankine's Civil Engineering is used as a text-book, supplemented by full explanations, additional notes, lectures, examples, and problems.

A complete course of instruction is also given in the graphical analysis of roof and bridge trusses and arches, as recently developed and applied. The student is made familiar with both the analytical and graphical methods of treatment and thus possesses ready proof of the accuracy of his calculations.

5. Hydraulics.—The law of the flow of water through orifices and pipes and over weirs; the gauging of streams and rivers; the designing of works for water supply, drainage, and sewerage; the laying out of canals; and the subjects of river and harbor improvements are treated in this course.

6. Machinery, Prime Movers, and Millwork.—A course of instruction is given in mechanism, or the general principles of machinery, involving the study of gearing, screws, cranks, and levers, and the dynamics of machinery. In the study of prime movers, special attention is given to turbine and other water motors, and to steam engines. In the theory of machine construction, problems involving the strength and design of machines, and the materials used in their construction, and also involving the application of the principles of electricity, are studied at length, in connection with such examples as illustrate the best practice. The instruction in millwork covers the distribution of power and the arrangement of shafting and machinery in manufacturing establishments. Practical problems involving the strength of shafting, belting, and gearing are fully treated. Tests are made to determine the efficiency of machines, and the value of lubricants.

7. Designs in Engineering and in Machine Construction.—Contemporaneously with the study of theory students are required to work out problems in design. They are furnished with the usual data for a design, and the kind or type of structure or machine is indicated. They are then expected to make the necessary calculations, paying particular attention to proportioning the different parts so as to secure strength, simplicity, and effect, and to present at a specified date complete working drawings, giving full details, accompanied by bills of materials, estimates, and specifications.

8. A course in **Thermodynamics** embraces the study of the principles governing the action of heat engines in general, hot-air and gas

engines, air compressors, compressed-air engines, and refrigerating apparatus.

9. Steam Engineering.—The work in this branch covers the practical use of steam. Furnaces and boilers are studied with reference to proper combustion of fuel; to securing maximum evaporative efficiency; and to proportioning the parts for strength, durability, and accessibility for cleaning and repairs. The care and management of engines and boilers, both in use and out of use, are fully considered. A study is made of the principal steam pumps and pumping engines. The practical application of steam to heating and ventilating purposes is treated by lectures, and by inspection of actual plants. Tests are made to determine the value of fuels, quality of steam, and the efficiency of furnaces, boilers, and engines.

10. Laboratory Work.—The laboratory work embraces experimental courses in the mechanical laboratory, and the practical courses in the various work shops. Instruction is given in the principles governing the action of cutting tools and the principal machine and hand tools used in the shop. Lectures are given on pattern making, moulding, and founding, covering the principal features of each.

The *Shop Practice* covers the application of principles previously studied. It comprises the actual manipulation of the tools used in working metal and wood, and in moulding. The student is required to do work in pattern making and moulding in green sand, in dry sand, and in loam, and to charge and have the management of the cupola and brass furnace during the operations of casting. Careful attention is given to the operations of founding and to making composition metals for specific purposes. The student is also required to put in practice, at the blacksmith's forge, his knowledge of the elementary principles of forging, and to forge and temper his own cutting tools. By working with iron and steel of different qualities the student becomes familiar with all grades of those materials. Practice is also afforded in soldering, brazing, and steam-fitting.

11. Marine Engineering and Naval Architecture.—The instruction in this branch comprises the study of marine steam engines and propelling instruments, the hydraulics of ship-building, buoyancy, metacentre, stability and trim, weight and centre of gravity, waves and rolling, structural strength, speed and resistance, propulsion by sails and steam engines, laying-off and taking-off, and other topics.

12. Metallurgy.—A course of instruction by lectures and recitations is given upon the subjects of fuel, refractory material, iron, and steel. The lectures are illustrated by charts and drawings of furnaces and appliances used, and by samples of furnace products.

13. Electrical Engineering.—The special electrical courses, addi-

tional to the elementary study of the subject, are devoted to primary and secondary generators, electrometallurgy, electrical units and methods of measurements, dynamo-electric machinery, the alternate-current transformer, arc and glow lamps, photometry, and the distribution of electricity and transmission of power. In addition, elective courses in mathematical electricity are offered.

The laboratory work in electricity is devoted mainly to the testing of primary and secondary batteries, to practice in making electrical measurements of precision by all the best methods, to setting up dynamos, motors, and storage batteries and testing them for efficiency, to the investigation of transformers for efficiency and for hysteresis curves, to photometry of both arc and glow lamps, and to special investigations connected with the preparation of a thesis.

14. Visits of Inspection.—As often as practicable, visits are paid to neighboring manufacturing establishments, and to electric-light and electric-power stations, for the purpose of acquiring a knowledge of the methods employed in building, in the construction of bridges, machinery, and ships, and the best practice in electrical manufacturing and engineering on a large scale.

EXAMINATIONS.

Examinations, usually in writing, are held at the end of each semester, but the classes are liable to be examined at any time, without notice, on any portion of their previous work.

FACILITIES FOR INSTRUCTION.

The collections for illustrating the instruction given comprise models, drawings, photographs, lithographs, and blue prints representing trusses, arches, and details of construction in iron, wood, and stone; also shapes of iron, working models of turbines and engines, and working drawings of a number of bridges. These collections are receiving additions from year to year, by gift and purchase, and are invaluable to the student.

Tests of engines and boilers, and of machinery in general will be made on request, and the profit of such work devoted to extending the facilities of the engineering laboratory. The data of all experiments and tests made are kept in the laboratory records.

All the laboratory work is on a practical basis, and is done as nearly as possible as it would be done in any well arranged manufacturing establishment. There is also a large and convenient metallurgical laboratory connected with the chemical laboratory, amply supplied with assay furnaces and other appliances such as are usually found in laboratories of this description. The latest and best books on professional subjects

are added yearly to the library, where they are accessible to all; and frequent references are made to them in the class room as the various subjects are brought forward.

PHYSICAL LABORATORY.

For a description of the physical laboratory, see page 26.

CHEMICAL LABORATORIES.

For a description of the chemical laboratories, see page 27.

ENGINEERING LABORATORY.

The Engineering Laboratory contains about 20,000 square feet of floor space. It is divided into rooms as follows:

The *Mechanical Laboratory*, 40 by 80 feet, is devoted to experimental work in connection with the testing of engines, boilers, pumps, indicators, belting, gearing, lubricants, and strength of materials, and to such original work as can be undertaken with advantage. The work also extends to the testing of engines, boilers, and water-wheels of neighboring mills and electric plants. The Knowles and the Gordon pumping engines at the City Water Works have been fitted up by the company with especial reference to the convenience of engineering students in making tests. The equipment contains, among other things, a 100,000-pound Olsen testing machine; a 2,000-pound cement testing machine; Thurston and Ashcroft oil testing machines; a Stirling boiler for high pressure; a high speed automatic engine; a Corliss engine; a Rider hot-air engine; Wheeler and Wainright surface condensers; an Alden absorption dynamometer; a Giddings traction recording dynamometer; an Emerson power-scale; several other forms of dynamometers; a large, electrically driven chronograph, built in the laboratory; a 36-foot open mercury column; special apparatus for testing pressure and vacuum-gauges and indicator springs; gauges; indicators; thermometers; pyrometers; tachometers; standard weights; steam pumps and injectors; rotary and centrifugal pumps; water meters; water motors, including a special universal water motor, built in the laboratory, together with pressure tanks and pumps for testing motors; hydraulic rams; water-wheels; air-pumps; blowers; apparatus for making tests on radiators and pipe coverings; apparatus for furnace gas analysis; a street railway motor; and other apparatus having special reference to work of investigation.

The *Iron Room*, or machine shop, and the *Wood Room*, or pattern shop, each 40 by 80 feet, contain the tools and apparatus usually found in first-class establishments, including special tools built in the laboratory. The pattern loft, 40 by 80 feet, contains a fine collection of patterns made in the laboratory.

The *Forge Shop*, 30 by 40 feet, is equipped with twelve forges, built in the laboratory. The blast is supplied by a No. 4 Sturtevant pressure blower, and the smoke is carried away by a No. 31 exhaust fan.

The *Foundry*, 30 by 40 feet, contains a 27-inch cupola, brass furnaces, and a core-oven; the blast is supplied by a No. 3 Sturtevant pressure blower.

The central wing, 32 by 54 feet, contains, on the first floor, a well-ventilated wash-room, with closets and other conveniences, an engine room with a 10 by 30 Reynolds-Corliss engine, and superintendent's office; on the second floor a well-lighted drawing room and a blue-print room. The basement and attic are used for storage. The tower, at an elevation of 75 feet, contains a tank of 100 barrels capacity for experimental work in hydraulics; also a mercury column and other apparatus.

New machinery is added to each shop from time to time for the accommodation of engineering students and others desiring instruction and practice in the use of tools for working in wood and metal. At the same time opportunity is afforded them to become familiar with the more common materials and forms of construction used in engineering structures, buildings, and machinery. In all work an effort is made to follow the practice of the best shops.

The instruction in all practical work is given by men of wide experience, selected for their mechanical skill.

COURSES OF INSTRUCTION.

The Courses of Instruction are subject to change from time to time; those announced for the year 1895-96 and required for graduation, as stated on pages 143 to 145, are described below, together with some technical elective courses which are designated accordingly. The amount of credit towards graduation assigned to each course is indicated by the expressions *one hour*, *two hours*, etc., an *hour of credit* being given for the satisfactory completion of work equivalent to one exercise a week during one semester. Lectures and recitations are usually one hour in length, but in laboratory work, drawing, and other practical exercises, a longer attendance is required in order to secure an hour of credit.

The courses given in the Department of Literature, Science, and the Arts, and described on pages 57 to 102.

are (with the exception of the courses in French and in German, for which special permission is required) all open as electives to engineering students who are qualified to pursue them with advantage.

FRENCH.

FIRST SEMESTER.

- B. Narrative Prose. Two sections. *Two hours.* Mr. ELDEN and Mr. BRANDON.
Course B is open to those who have taken Course A, or who have passed an entrance examination in French.
- D. Scientific Reading. Two sections. *Two hours.* Mr. BRANDON and Mr. FRANÇOIS.

SECOND SEMESTER.

- A. Beginner's Course. Grammar and Reader. Two sections. *Four hours.* Mr. BRANDON and Mr. FRANÇOIS.
- C. Descriptive Prose. *Two hours.* Mr. ELDEN.

GERMAN.

FIRST SEMESTER.

- A. Beginner's Course. Thomas's German Grammar, Part 1, and an easy German Text. Two sections. *Four hours.* Mr. DIEKHOFF.
- C. Descriptive Prose. *Two hours.* Mr. DIEKHOFF.

SECOND SEMESTER.

- B. Narrative Prose. Easy Stories. Two sections. *Two hours.* Mr. DIEKHOFF.
- D. Technical Prose. Dippold's Science Reader. Two sections. *Two hours.* Mr. DIEKHOFF.

ENGLISH AND RHETORIC.

FIRST SEMESTER.

- 1. Paragraph-Writing. *Two hours.* Mr. STRAUSS.

SECOND SEMESTER.

- 1. Paragraph-Writing. Three sections. *Two hours.* Mr. STRAUSS.

MATHEMATICS.

Students of engineering are required to take in order Courses 1, 2, 3, 4, and 6. They are also required to take Course 1*b*, unless they have passed a satisfactory examination for admission in plane trigonometry, but no credit toward graduation is given to engineering students for Course 1*b*.

FIRST SEMESTER.

1. Algebra and Analytic Geometry (I). Five sections. *Four hours.* Mr. LYMAN, Mr. HALL, Mr. GODDARD, and Mr. COAR.
- 1b. Plane Trigonometry. Three sections. *Two hours.* Mr. GODDARD and Mr. COAR.
3. Calculus. Four sections. *Five hours.* Assistant Professor ZIWET, Mr. LYMAN, and Dr. GLOVER.
6. Calculus and Mechanics (II). Three sections. *Four hours.* Assistant Professor ZIWET and Mr. LYMAN.

SECOND SEMESTER.

2. Analytic Geometry (II). Six sections. *Four hours.* Mr. LYMAN, Mr. HALL, Mr. GODDARD, and Mr. COAR.
4. Calculus and Mechanics (I). Three sections. *Five hours.* Assistant Professor ZIWET, Mr. LYMAN, and Dr. GLOVER.

PHYSICS.

FIRST SEMESTER.

1. Mechanics, Sound, and Light. *Five hours.* Assistant Professor REED.
Course 1 is open to those who have passed an entrance examination in physics, and to all others who have sufficient preparation. A knowledge of plane trigonometry is indispensable.
- 3a. Physical Laboratory Work for Beginners. *Three hours.* Dr. GUTHE. Fee, \$3.00.
Course 3a is also given in the second semester.
7. Electricity and Magnetism: Mascart and Joubert. *Three hours.* Assistant Professor PATTERSON. (Elective.)
Course 7 must be preceded by Course 2. A knowledge of calculus is also required.
16. Theory of Heat: Preston. *Two hours.* Professor CARHART. (Elective.)

SECOND SEMESTER.

2. Electricity and Magnetism. *Four hours.* Professor CARHART and Assistant Professor REED.
Course 2 must be preceded by Course 1 and by a course in general or in analytical chemistry.
- 2a. Heat. Lectures and recitations. *Two hours.* Professor CARHART and Assistant Professor REED.
Course 2a must be preceded by Course 1.
- 3a. Physical Laboratory Work for Beginners. Two sections. *Three hours.* Dr. GUTHE. Fee, \$3 00.
Course 3a is also given in the first semester.

10. Electricity and Magnetism: Mascart and Joubert. *Two hours.*
Assistant Professor PATTERSON. (Elective.)
Course 10 must be preceded by Course 7.
12. Advanced Laboratory Work in Electricity and Magnetism. *Three hours.* Dr. GUTHE. Fee, \$3.00. (Elective.)
Course 12 must be preceded by Course 5.
15. Photometry. Continuation of Course 14. Laboratory work. *One or two hours.* Assistant Professor PATTERSON. Fee, \$1.00 or \$2.00. (Elective.)
18. Theory of Potential and its Applications. *Two hours.* Dr. GUTHE. (Elective.)
Course 18 must be preceded by Course 2. A knowledge of calculus is required.
19. Design of Electrical Machinery and Appliances. Lectures. *Two hours.* Professor CARHART. (Elective.)
Course 19 must be preceded by Course 8a.

CHEMISTRY.

The laboratory work requires from two to three hours daily, taken between 1 and 6. Permission for forenoon hours is given when necessary.

FIRST SEMESTER.

1. Elementary Inorganic Chemistry, Descriptive and Experimental. Lectures and recitations. *Three hours.* Mr. HIGLEY.
Course 1 is not open to students credited with chemistry for admission. Such students must elect either Course 2 or Course 3.

EITHER FIRST OR SECOND SEMESTER.

2. Laboratory Work in General Chemistry. *Three hours.* Mr. HIGLEY and Mr. LICHTY.
Course 2 must be preceded or accompanied by Course 1 or an equivalent. It is supplementary to Course 1 and covers in the laboratory the ground covered by lectures in Course 1.

SECOND SEMESTER.

3. First Steps in Qualitative Analysis. Recitations and laboratory work. *Five hours.* Professor JOHNSON.
Course 3 is a short course, designed for students of civil, mechanical, and electrical engineering.

METALLURGY.

FIRST SEMESTER.

2. Micro-Metallography. The study of the microscopic structure of metals as related to their physical and chemical properties. Laboratory work with reading. *One hour.* Professor E. D. CAMPBELL. (Elective.)

Course 2 can be taken only by those who have taken Course 1, and have received special permission.

SECOND SEMESTER.

1. Fuel and Refractory Material, Iron and Steel. *Three hours.* Professor E. D. CAMPBELL.

Course 1 must be preceded by Course 1 or Course 3 in chemistry, or an equivalent.

ASTRONOMY.

EITHER FIRST OR SECOND SEMESTER.

4. Practical Astronomy. Use of portable transit. *Three hours.* Mr. GILLIS.

Course 4 requires a knowledge of logarithms, spherical trigonometry, and differential and integral calculus.

SECOND SEMESTER.

- 5a. Computing. *Two hours.* Mr. GILLIS. (Elective.)

MINERALOGY.

EITHER FIRST OR SECOND SEMESTER.

1. Lectures and practice. *Two hours.* Professor PETTEE.
For Course 1 an elementary knowledge of chemistry is desirable.

DRAWING.

FIRST SEMESTER.

1. Elementary Drawing. Practice. Three sections. *Two hours.* Mr. WRENTMORE and Mr. GOULDING.

Sec. I is for students of civil engineering, Sec. II for students of electrical engineering, and Sec. III, which begins the seventh week of the semester, is intended for students of mechanical engineering, who take Course 4 in surveying in the first six weeks of the semester.

4. Free-hand Drawing; Pen and Ink Drawing; Sketching. *Three hours.* Professor DENISON or Miss HUNT.
9. Sketching of Parts of Machines; Lettering. *Three hours.* Professor DENISON.

Course 9 is designed especially for students of mechanical engineering.

10. Continuation of Course 8. *Two hours.* Professor DENISON or Miss HUNT. (Elective.)

Course 10 must be preceded by Courses 4 and 8. The section is limited in number.

13. Water-Color Drawing. *Three hours.* Professor DENISON or Miss HUNT.

Course 13 must be preceded by Course 8. It can be taken only by special permission.

SECOND SEMESTER.

5. Descriptive Geometry. Recitations and drawing. Five sections. *Three hours.* Professor DENISON, Mr. WRENTMORE, and Mr. GOULDING.

Course 5 must be preceded by Course 1. Sec. I is for students of civil engineering, Sec. II for students of electrical engineering, Sec. III for students of mechanical engineering, Secs. IV and V for others.

6. Shades, Shadows, and Perspective. *Three hours.* Professor DENISON.

Course 6 must be preceded by Course 5.

7. Free-Hand Drawing (advanced). *Three hours.* Professor DENISON or Miss HUNT. (Elective.)

In Course 7 the section is limited in number.

8. Architectural and Water-Color Drawing. *Two hours.* Professor DENISON or Miss HUNT. (Elective.)

Course 8 must be preceded by Course 1 or 4. The section is limited in number.

14. Stereotomy. *Two hours.* Professor DENISON.

Course 14 must be preceded by Course 5.

SURVEYING.

1. Lectures and Field Practice with Instruments. *Four hours.* Professor J. B. DAVIS.

The field practice in Course 1 continues during favorable weather until Christmas.

4. Use of Instruments. *One hour.* Professor J. B. DAVIS.

Course 4 covers the first six weeks of the semester, and is for students of mechanical engineering who take Course 1 in drawing the remainder of the semester.

6. Continuation of Course 5. Phototopography. Field work and drawing. *One hour.* Professor J. B. DAVIS.

The ability to make photographic negatives will be of service.

SECOND SEMESTER.

2. Continuation of Course 1. Lectures and text-book. *Five hours.* Professor J. B. DAVIS.

Course 2 must be preceded by Course 1.

3. Field Work in Camp for four weeks. Professor J. B. DAVIS.

Except by special permission Course 3 is open only to students who are working for a degree in civil engineering. It is given in June.

5. Topography. Transit and Stadia. Plane Table. Field work and drawing. *Three hours.* Professor J. B. DAVIS.
Course 5 is given four times a week for thirteen weeks.
7. Geodesy. Geodetic Methods. Lectures and text-book. *Three hours.* Professor J. B. DAVIS. (Elective.)
Course 7 must be preceded by Courses 1 and 2. It is given five times a week for twelve weeks.

CIVIL ENGINEERING.**FIRST SEMESTER.**

1. Municipal Engineering. Lectures and text-book. *Five hours.* Professor J. B. DAVIS. (Elective.)
4. Graphical Analysis of Structures. *Two hours.* Professor GREENE.
Course 4 must be preceded by Course 3.
5. Strength and Resistance of Materials. Two sections. *Two hours.* Professor GREENE.
Course 5 must be preceded by Course 6 in mathematics. Sec. I is for students in civil engineering; Sec. II, for others.
6. Engineering. Theory of construction. *One hour.* Professor GREENE.
Course 6 must be preceded by Course 6 in mathematics.
7. Engineering Design. *Five hours.* Professor GREENE.
Course 7 accompanies Courses 5 and 6.

SECOND SEMESTER.

2. Tests of Materials. *One hour.* Professor GREENE. (Elective.)
3. Graphical Analysis of Structures. Two sections. *Two hours.* Professor GREENE.
Course 3 requires at least a limited knowledge of statics. Sec. II is for students in civil engineering; Sec. I, for others.
8. Engineering. Theory of construction. *Four hours.* Professor GREENE.
9. Hydraulics. Two sections. *One hour.* Professor GREENE.
10. Water Supply and Sewerage. *One hour.* Professor GREENE. (Elective.)

MECHANICAL ENGINEERING.**FIRST SEMESTER.**

- 5a. Principles of Mechanism. *Three hours.* Professor DENISON.
- 5b. Principles of Mechanism. *Two hours.* Professor DENISON.
Course 5a is for students of mechanical and of electrical engineering; Course 5b is for students of civil engineering. Both courses must be preceded by Course 1 in mathematics, and by Courses 1 and 5 in drawing.

- 8a. Prime Movers. Water wheels and steam engines. *Two hours.* Professor COOLEY and Assistant Professor WAGNER.
- 8b. Prime Movers. Water wheels. *One hour.* Professor COOLEY.
Course 8b is intended for those who have taken Course 9; 8a, for all others. Both courses must be preceded by Course 7a or 7b.
10. Theory of Machine Design, including Electrical Design. *Two hours.* Professor COOLEY and Assistant Professor WAGNER.
Course 10 must be preceded or accompanied by Course 5 in civil engineering.
11. Design of General Machinery. *Three hours.* Professor COOLEY.
Course 11 should be accompanied by Course 10.
12. Thermodynamics. Hot-air and gas engines, air compressors, and refrigerating machines. *Two hours.* Assistant Professor WAGNER.
Course 12 must be preceded by Course 7 and by Courses 1 and 2 in physics.
16. Steam Engineering. Practical work in the laboratory. *Three hours.* Professor COOLEY and Assistant Professor WAGNER.
Fee, \$5.00.
Course 16 must be preceded or accompanied by Course 8a or 8b.
It is also given in the second semester.

EITHER FIRST OR SECOND SEMESTER.

All courses in shopwork are under the supervision of Superintendent C. G. TAYLOR, who gives in each of the Courses, 1a, 2a, 3a, and 4a, lectures on workshop appliances and materials. Fee for each course in shop-work, \$5.00.

Courses 1a, 2a, 3a, 4a, and 6a, may also be elected by advanced students as 1b, 2b, 3b, 4b, and 6b.

- 1a. Shop Practice. Wood work and pattern work. Three sections. *Three hours.* Mr. PURFIELD.
- 2a. Shop Practice in Forging. Six sections. *Two hours.* Mr. ORR.
- 3a. Shop Practice in Iron Work. Three sections. *Three hours.* Mr. SMOOTS.
- 4a. Shop Practice in Foundry Work. Three sections. *Two hours.* Mr. WINSLOW.
- 6a. Design of Shop Machinery. One or two sections. *Two hours.* Superintendent C. G. TAYLOR.
Course 6a must be preceded or accompanied by Course 5a or 5b, and be preceded by Courses 1, 5, and 9 in drawing.

SECOND SEMESTER.

- 7a. Dynamics of Machinery. Two sections. *Two hours.* Assistant Professor WAGNER.

- 7b. Dynamics of Machinery. *One hour.* Assistant Professor WAGNER.
Course 7b is the same as the first half of Course 7a, and is intended for students of civil engineering. Both courses must be preceded by Course 6 in mathematics, and by Course 1 in physics.
9. Steam Engines. Valve gears. *Three hours.* Assistant Professor WAGNER.
Course 9 must be preceded or accompanied by Course 7a or 7b.
13. Machinery and Mill Work. *Two hours.* Professor COOLEY.
14. Design of Engines and Boilers. *Two hours.* Professor COOLEY.
16. Steam Engineering. Practical work in the laboratory. *Three hours.*
Professor COOLEY and Assistant Professor WAGNER. Fee, \$5.00.
Course 16 must be preceded by Course 8a or 8b. It is also given in the first semester.

ELECTRICAL ENGINEERING.**FIRST SEMESTER.**

4. Primary and Secondary Batteries. Recitations and laboratory work. *Two hours.* Dr. GUTHE. Fee, \$1.00.
Course 4 must be preceded by Courses 1, 2, 3a, and a course in general or in analytical chemistry.
5. Electrical Measurements. Lectures, recitations, and laboratory work. *Four hours.* Professor CARHART, Assistant Professor PATTERSON, and Dr. GUTHE.
Course 5 must be preceded by Courses 1, 2, and 3a. A knowledge of calculus is also required.
9. Distribution of Electricity. Lectures. *Two hours.* Assistant Professor PATTERSON.
Course 9 must be preceded by Course 8a.
13. The Alternate Current Apparatus. *Two hours.* Professor CARHART.
Course 13 must be preceded by Course 8a.
14. Photometry of Electric Lamps: Palaz. Recitations and laboratory work. *Two hours.* Assistant Professor PATTERSON. Fee, \$1.00.

SECOND SEMESTER.

- 8a. Electro-Dynamic Machinery. Lectures and laboratory work. *Four hours.* Professor CARHART and Assistant Professor PATTERSON. Fee, \$3.00.
Course 8a must be preceded by Course 5 and is for students of electrical engineering only.

MARINE ENGINEERING.

Course 2 is designed for graduate students and undergraduates who have had the necessary preliminary training. Courses 1 and 3 are for graduates.

FIRST SEMESTER.

1. Naval Architecture. Professor COOLEY.

SECOND SEMESTER.

2. Marine Engines. *Three hours.* Professor COOLEY. (Elective.)
3. Ship-Building. Professor COOLEY.

MINING ENGINEERING.

SECOND SEMESTER.

1. Exploitation of Mines. Methods of opening, laying-out, and working mines. *Five hours.* Professor PETTEE. (Elective.)
- Course 1 requires a knowledge of mineralogy and general geology.

REQUIREMENTS FOR GRADUATION.

THE DEGREE OF BACHELOR OF SCIENCE.

To earn the degree of Bachelor of Science in civil, mechanical, or electrical engineering, the student must secure *one hundred and twenty Hours of Credit** in a prescribed course of study, as given below, and must present a satisfactory thesis. The diploma given indicates the line of study pursued.

Bachelors of Arts, of Philosophy, of Science, and of Letters, of this University, and graduates of any other reputable college, are recommended for the same degree with the regular students, after completion of the special requirements alone of the several courses. These requirements can be completed in two years. The culture imparted by classical or other liberal training will be found to have its uses for one engaged in engineering work, and previous discipline of the faculties in exact research will enable the professional student to master more easily the requirements of the course. All the time the student can devote to general studies before taking up specialties will be well spent.

GENERAL REQUIREMENTS.

The *general requirements* are as follows:

In French and German: fifteen hours, to be selected by the student from all the courses open to him in these two languages.

In English: Course 1.

In Mathematics: Courses 1, 2, 3, 4, 6.

In Physics: Course 1.

In Chemistry: Course 1 or Course 3.

In Drawing: Courses 1, 5.

In Civil Engineering: Course 5.

* For explanation of the term Hour of Credit, see page 134; and for further information in regard to the courses prescribed for graduation, see pages 135 to 143.

SPECIAL REQUIREMENTS.

The *special requirements* in the several courses are as follows:

1. *In Civil Engineering.*

To obtain the recommendation of the Faculty for the degree of Bachelor of Science in Civil Engineering, the student must satisfactorily complete, in addition to the thesis and the *general requirements* named above, courses as follows:

In Mineralogy: Course 1.

In Astronomy: Course 4.

In Drawing: Courses 4, 6, 14.

In Surveying: Courses 1, 2, 3, 5, 6.

In Civil Engineering: Courses 3, 4, 6, 7, 8, 9.

In Mechanical Engineering: Courses 5*b*, 7*b*, 8*a*.

In Elective Studies, taken in the Department of Engineering, or in the Department of Literature, Science, and the Arts: an amount sufficient to secure in all *one hundred and twenty Hours of Credit*.

2. *In Mechanical Engineering.*

To obtain the recommendation of the Faculty for the degree of Bachelor of Science in Mechanical Engineering, the student must satisfactorily complete, in addition to the thesis and the *general requirements* named above, courses as follows:

In Physics: Courses 2, 2*a*.

In Drawing: Course 9.

In Surveying: Course 4.

In Civil Engineering: Courses 3, 9.

In Mechanical Engineering: Courses 1*a*, 2*a*, 3*a*, 4*a*, 5*a*, 6*a*, 7*a*, 8*b*, 9, 10, 11, 12, 13, 14, 16.

In Metallurgy: Course 1.

In Elective Studies, taken in the Department of Engineering, or in the Department of Literature, Science, and the Arts: an amount sufficient to secure in all *one hundred and twenty Hours of Credit*.

3. *In Electrical Engineering.*

To obtain the recommendation of the Faculty for the degree of Bachelor of Science in Electrical Engineering, the student must satisfactorily complete, in addition to the thesis and the *general requirements* named above, courses as follows:

In Physics: Courses 2, 2*a*, 3*a*.

In Drawing: Course 9.

In Mechanical Engineering: Courses 1*a*, 2*a*, 3*a*, 4*a*, 5*a*, 6*a*, 7*a*, 8*a*.

In Electrical Engineering: Courses 4, 5, 8*a*, 9, 13, 14.

In Elective Studies, taken in the Department of Engineering, or in the Department of Literature, Science, and the Arts: an amount sufficient to secure in all *one hundred and twenty Hours of Credit*.

THE DEGREES OF CIVIL ENGINEER, MECHANICAL ENGINEER, AND ELECTRICAL ENGINEER.

The conditions on which the degree of Civil Engineer, as a second degree, is conferred, are as follows:

The degree of Civil Engineer may be conferred upon Bachelors of Science of this University, who have taken the degree for a course in civil engineering, if they furnish satisfactory evidence that they have pursued further technical studies for at least one year, and, in addition, have been engaged in professional work, in positions of responsibility, for another year. The first of the above requirements may be satisfied by pursuing at the University, under the direction of the Faculty, a prescribed course of study for an amount of time, not necessarily consecutive, equivalent to a college year. If the candidate does not reside at the University, his course of study must be approved in advance by the professor of civil engineering, and he must prepare a satisfactory thesis on some engineering topic, to be presented, together with a detailed account of his professional work, one month, at least, before the date of the annual Commencement at which he expects to receive the degree.

The conditions on which the degrees of Mechanical Engineer, and Electrical Engineer, as second degrees, are conferred upon Bachelors of Science of this University who have taken the degree for a course in mechanical engineering, or in electrical engineering, are analogous in character and in amount to those given above for the degree of Civil Engineer.

. FEES AND EXPENSES,*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.†

Diploma Fee.—For all alike, *ten dollars*.

Laboratory Courses.—The required laboratory courses cost approximately as follows: *Shop Work.*—In the mechanical and electrical engineering courses, *twenty dollars*. *Physical Laboratory.*—A charge of

* The Matriculation Fee and the Annual Fee must be paid in advance. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

† An annual fee of ten dollars is required of all graduates who are granted the privilege of pursuing studies for an advanced degree *in absentia*.

one dollar is made for a course requiring one exercise a week during one semester, and at the same rate for the longer courses. *Mechanical Laboratory.*—The charge for the course in steam engineering is *five dollars*. *Chemical Laboratory.*—Students who take laboratory courses in chemistry are required to pay for the materials and apparatus consumed by them. The average expense is about *ten dollars*.

The fee required for any course has to be paid before the work of the course is begun.

The total amount of fees paid to the University during the whole four years' course, for matriculation, incidental expenses, materials used, and diploma, is, for Michigan students, from \$175 to \$200; and for others, from \$230 to \$255, varying more or less according to the student's actual laboratory expenses.

For additional information in regard to expenses see page 35.

Department of Medicine and Surgery.

A special Announcement giving further information in regard to this Department is published annually. For copies of this Announcement or for other information relating to the Department, address the Dean of the Department of Medicine and Surgery, Ann Arbor, Michigan.

THE Department of Medicine and Surgery, for which provision was made in the legislative act by which the University was organized in 1837, was opened for students in 1850. The college year was lengthened from six to nine months in 1877. The course was lengthened to three years in 1880 and to four years in 1890.

The college year extends from the first day of October to the Thursday following the last Wednesday in June. The lectures continue till the middle of June. The examinations are then begun and concluded in time for the Commencement exercises.

REQUIREMENTS FOR ADMISSION.

Every candidate for admission to the Department of Medicine and Surgery must be at least seventeen years of age, and must present to the Faculty satisfactory evidence of a good moral character.

Women are admitted, as to all other departments of the University, on the same conditions as men.

Matriculates in a regular course in the Department of Literature, Science, and the Arts (see page 36), graduates of literary colleges of good

standing, graduates of approved diploma schools,* and of other high schools of equal standing, are admitted without examination on presentation of proper evidence to the Examining Committee of the Faculty. For all others the requirements for admission are as follows:

English.—An essay of not less than two pages (foolscap), correct in spelling, punctuation, capital letters, grammar, and paragraphing.

Mathematics.—*Arithmetic.*—Fundamental Rules, Fractions (common and decimal), Denominate Numbers, Percentage, Proportion, Involution and Evolution, and the Metric System of Weights and Measures.

Algebra.—Fundamental Rules, Fractions, Equations of the First Degree containing two or more unknown quantities.

Geometry.—Plane Geometry.

Physics.—An amount represented by Carhart and Chute's Elements of Physics.

Botany.—The elements of Vegetable Morphology and Physiology as given in Spalding's Introduction to Botany.

Zoology.—Packard's Zoology, briefer course; or McMurrich's Invertebrate Morphology.

History.—Myers's General History, or an equivalent; and Higginson's or Johnston's History of the United States.

Latin.—Jones's First Latin Book, or Harkness's Latin Reader, or an equivalent amount in any other text-book. An applicant who is not prepared to pass the examination in Latin may take a condition in this subject, which condition he must remove before entering on the work of the second year.

Examinations for admission will be held Tuesday and Wednesday, September 29 and 30, 1896. Applicants are required to present themselves on one of these days as they are expected to be in attendance on the first day of the term, when the regular course of instruction begins. To provide for cases in which it is absolutely impossible for the applicant to be present at the time announced, supplementary examinations will be held at such times as may be determined upon by the Faculty, but no excuse, except of an urgent character, will be accepted for failure to appear at the first examination.

Before admission to examination every applicant is required to present to the Secretary of the Faculty the Treasurer's receipt for the payment of the matriculation fee and the annual fee. It will, therefore, be necessary for him to apply first to the Steward at his office in University Hall, register his name as a student in the Department of Medicine and Surgery, and pay his fee to the Treasurer. In case of rejection, the money paid preliminary to examination will be refunded.

*The diploma schools comprise all those approved by the Faculty of the Department of Literature, Science, and the Arts. For a list of these see page 47.

ADMISSION TO ADVANCED STANDING.

In order to be admitted to advanced standing, a student must have completed not only the didactic courses, *but the laboratory courses also*, already taken by the class to which he seeks admission. As a rule, the only laboratory courses which students applying for advanced standing have completed, are those in chemistry. When, in the judgment of the professor in charge, such a course is equivalent to that given in this Department, he may give the student credit for the work done, and thus avoid repetition. This, however, does not enable the student to finish the course earlier; it merely gives a few weeks of time which he may profitably spend on some advanced or optional course.

No credit can be given for lecture courses taken in schools unprepared to give the proper laboratory teaching. This applies to the clinical branches as well as to the scientific. For instance, lectures on surgery, even when accompanied by clinical demonstrations, cannot be accepted in lieu of the course given in this Department in the third year, which provides for operations by the students on animals.

Graduates of other reputable medical colleges, which require not less than three courses for graduation, may, by special permission of the Faculty, be admitted to the fourth-year class in this Department.

COURSE OF INSTRUCTION.

The Course of Instruction covers four years of nine months each. The first two years are devoted to the more strictly scientific work which serves as a basis for the technical and clinical studies which follow. The forenoons are given to lectures and recitations, three each day; the afternoons to laboratory drill during the first two years, and to the study of methods of diagnosis and means of treatment during the third and fourth years. Four or five hours a day are required in the laboratory and the hospital.

SCHEDULE OF STUDIES.***FIRST YEAR.****LECTURES AND RECITATIONS IN FIRST SEMESTER.**

<i>Subjects.</i>	<i>Time Required.</i>
Osteology,	2 hours a week.
General Anatomy,	2 hours a week.
General Chemistry,	5 hours a week.
Bacteriology,	4 hours a week.

*Optional advanced courses are offered in all the courses in the schedule.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
General Anatomy,	2 hours a week.
Physics,	4 hours a week.
Organic Chemistry,	5 hours a week.
Histology,	3 hours a week.

LABORATORY WORK IN FIRST YEAR.*

<i>Subjects.</i>	<i>Time Required.</i>
Anatomy,	Every day for 12 weeks.
Chemistry,	Every day for 12 weeks.
Bacteriology,	Every day for 12 weeks.

SECOND YEAR.

LECTURES AND RECITATIONS IN FIRST SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
Regional Anatomy,	2 hours a week.
Anatomy of Nervous System,	2 hours a week.
Physiology,	5 hours a week.
Hygiene,	3 hours a week.
Embryology,	2 hours a week.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
Regional Anatomy,	2 hours a week.
Surgical Anatomy,	2 hours a week.
Physiology,	5 hours a week.
Physiological Chemistry,	3 hours a week.
Hygiene,	2 hours a week.

LABORATORY WORK IN SECOND YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Anatomy,	Every day for 12 weeks.
Physiological Chemistry,	Every day for 12 weeks.
Histology,	Every day for 6 weeks.
Electrotherapeutics,	Every day for 6 weeks.

THIRD YEAR.

LECTURES AND RECITATIONS IN THIRD YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Theory and Practice,	4 hours a week.
General Surgery,	2 hours a week.
Obstetrics,	2 hours a week.
Materia Medica and Therapeutics,	5 hours a week.
Pathological Histology,	2 hours a week.

* Four to five hours constitute a day's work in the laboratory.

LABORATORY AND DEMONSTRATION COURSES IN THIRD YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Practical Pathology,	Every day for 5 weeks.
Clinical Medicine,	Every day for 5 weeks.
Nervous Diseases,	Every day for 5 weeks.
Operative and Minor Surgery,	Every day for 5 weeks.
Obstetrics and Gynæcology,	Every day for 5 weeks.
Ophthalmology, Otology, and Laryngology,	Every day for 5 weeks.

CLINICAL COURSES IN THIRD YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Internal Medicine,	2 hours a week.
Surgery,	2 hours a week.
Gynæcology,	2 hours a week.
Ophthalmology,	2 hours a week.
Nervous Diseases,	1 hour a week.

FOURTH YEAR.

LECTURES AND RECITATIONS IN FOURTH YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Theory and Practice,	2 hours a week.
Special Surgery,	3 hours a week.
Obstetrics and Gynæcology,	3 hours a week.
Diseases of the Nervous System,	2 hours a week.
Dermatology and Syphilology,	2 hours a week.
Ophthalmology, Otology, and Laryngology,	2 hours a week.

CLINICAL COURSES IN FOURTH YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Internal Medicine,	4 hours a week.
Surgery,	2 afternoons a week.
Obstetrics and Gynæcology,	2 afternoons a week.
Dermatology and Syphilology,	2 hours a week.
Ophthalmology, Otology, and Laryngology,	2 afternoons a week.
Diseases of Nervous System,	1 hour a week.

BEDSIDE AND DISPENSARY INSTRUCTION.

Senior students are given charge of patients, and are required to make diagnoses, prescribe, dress wounds, and perform minor operations under the direction of the professor in charge. A lying-in-ward furnishes obstetrical cases, which are attended by the senior students in rotation.

EXAMINATIONS.

Examinations (written, oral, or both written and oral) are held at the close of each course or semester. Students "*conditioned*" cannot apply for another examination in the same subject until the close of the next course or semester, except that a student conditioned at the close of the college year may ask for another examination in the first two weeks of the following year. Students reported "*not passed*" are required to take the course over again before applying for re-examination. Candidates for graduation, who fail in an examination, are allowed a re-examination before the entire Faculty. No student is recommended for graduation until he has completed all his required work and has passed all his examinations. Further rules concerning examinations are given in the special Announcement of the Department.

INSTRUCTION FOR WOMEN.

The course of instruction for women is in all respects equal to that for men. Practical Anatomy is pursued by the two sexes in separate rooms, but in the lectures, in public clinics, in the several laboratories, and in various class exercises, it is found that both sexes may attend with propriety at the same time.

EQUIVALENT COURSES IN THE DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

All the subjects of the first two years of the preceding schedule, with the exception of electrotherapeutics, are taught in the elective courses open to students in the Department of Literature, Science, and the Arts. Students in that department who intend to study medicine after taking the bachelor's degree, may shorten their total period of residence at the University by from a year to a year and a half or two years, if they pursue, as literary students, courses that cover the subjects required in the first two years of the medical curriculum. The precise amount of time gained will depend upon the amount of required medical work the student completes. Under certain conditions (page 103) literary students are allowed to be registered as students of medicine also. While this opportunity is open to all literary students, it is probable that the course leading to the degree of Bachelor of Science in Biology (page 106) will be the most attractive to those who intend to take also the degree of Doctor of Medicine. Students wishing to take advantage of the opportunity here offered for combining literary and professional work should consult each semester with a committee on courses appointed by the Medical Faculty. This committee at present consists of Professor Novy and Assistant Professor Huber.

The courses offered in the Department of Literature, Science, and the Arts, which are accepted in place of the requirements in the correspond-

ing subjects in the Department of Medicine and Surgery, are given below. They are more fully described in the chapter on the Literary Department, pages 85 to 101.

FIRST YEAR.

Medical Courses.

Anatomy and Osteology
General Chemistry,
Organic Chemistry,
Laboratory Chemistry,
Physics,
Bacteriology,
Histology,

Literary Courses.

Human Anatomy: Courses 1, 2, 3, 5.
General Chemistry: Courses 1, 4.
Organic Chemistry: Course 28.
Analytical Chemistry: Course 3.
Physics: Course 1.
Hygiene: Courses 2, 3.
Animal Morphology: Course 6 or 7.

SECOND YEAR.

Medical Courses.

Anatomy,
Physiology,
Hygiene,
Embryology,
Physiological Chemistry,

Literary Courses.

Human Anatomy: Courses 4, 6.
Physiology: Courses 1, 2.
Hygiene: Courses 1, 1a.
Animal Morphology: Course 9.
Physiological Chemistry: Courses 6, 7.

COMBINED COURSE LEADING TO THE DEGREES OF BACHELOR OF SCIENCE AND DOCTOR OF MEDICINE.

Students who desire to earn the two degrees, Bachelor of Science in Biology (page 106) and Doctor of Medicine, in six years, are advised to arrange their work in the Department of Literature, Science, and the Arts in accordance with the scheme outlined below. The courses named are prescribed for the degrees mentioned, with the exception of those enclosed in brackets, which are recommended as elective courses. Additional work will also have to be taken to satisfy the requirements for the Bachelor's degree in the Literary Department.

FIRST YEAR.

First Semester: French, four hours; German, four hours; Mathematics, three hours; General Biology 1, five hours.

Second Semester: French or German, four hours; Mathematics, four hours; English, two hours; General Biology 2, five hours.

SECOND YEAR.

First Semester: Philosophy, three hours; Physics 1, five hours; General Chemistry 1, three hours; [Animal Morphology 4, five hours].

Second Semester: General Chemistry 4, four hours; Analytical Chemistry 3, five hours; [Animal Morphology 5, five hours].

THIRD YEAR.

First Semester: Hygiene 1 and 2, six hours; Animal Morphology 9, five hours; Human Anatomy 1 and 2, four hours.

Second Semester: Organic Chemistry 28, four hours; Hygiene 12 and 3, seven hours; Human Anatomy 3 and 5, six hours.

FOURTH YEAR.

First Semester: Animal Morphology 6, five hours; Human Anatomy 4 and 6, six hours; Physiology 1, five hours.

Second Semester: Physiological Chemistry 6 and 7, ten hours; Physiology 2, five hours.

FIFTH AND SIXTH YEARS.

The work of the fifth and sixth years will be the same as the work of the third and fourth years of the course in the Department of Medicine and Surgery with the addition of the course in electrotherapeutics.

REQUIREMENTS FOR GRADUATION.

To be admitted to the degree of Doctor of Medicine, a student must be twenty-one years of age and possess a good moral character. He must have completed the required courses in laboratory work, and have passed satisfactory examinations on all the required studies included in the full course of instruction. He must have been engaged in the study of medicine for the period of four years. If admitted to advanced standing, he must have attended four full courses of medical lectures, *the last two of which must be in this Department*, and have passed the required examinations.

GRADUATE COURSES.

Graduates of this Department of the University, or of other medical schools, are admitted to any one or more of the regular courses of the curriculum on giving evidence of their ability to profit by the instruction given. Advanced courses, beyond the regular curriculum, are also arranged in several of the subjects taught. Graduate students are required to pay for each course, of six weeks duration, the sum of ten dollars in addition to the ordinary laboratory expenses of the course, which vary with the character of the work.

The nature of the work arranged for graduate students in some of the branches of instruction may be seen from the following descriptive outline:

Hygiene and Bacteriology.—(a) A course of advanced bacteriological study, such as a student who has already completed the required courses in bacteriology may elect. (b) A course arranged especially for health officers, and including the chemical and bacteriological examinations of food, water, soil, and air.

Electrotherapeutics.—A course covering the subjects of diagnosis, electrolysis, the management of continuous-current and cautery batteries, and the use of induction coils and the static machine in their therapeutic applications.

Pathology.—A systematic course in pathological histology is open to graduates, as are also special courses in the pathological histology of organs, tumors, blood, etc. Those wishing to take the latter courses must have had the necessary preliminary training.

Physiology.—(a) A course in physiological demonstrations; especially those intended to illustrate class lectures. The course is designed for those who teach physiology, but have not had opportunity of learning the methods of preparing physiological experiments and vivisections. (b) For those who have sufficient training in laboratory methods, the apparatus and facilities of the laboratory are offered for the investigation of special problems.

Histology.—(a) A course in histological technique, including the methods of preparing, staining, and sectioning tissues. The course is designed for those desiring to fit themselves for histological research. (b) A course on the microscopic anatomy of the eye and ear and the central nervous system.

Chemistry.—Graduates may select work in any of the courses provided in the several departments of the University. The courses in analytical and organic chemistry are described on pages 83 to 91. Special studies for individual purposes may be undertaken. Opportunity for research is given. The chemical library is supplied with the extensive repositories of science required in research, and with a wide range of literature of applied chemistry. In any part of the laboratory graduates may select any work they are prepared to pursue.

Anatomy.—Graduates may pursue a special course in the anatomy of the nervous system, and facilities are offered for the investigation of special problems of anatomy, and for the thorough anatomical study of regions of special surgical importance.

FACILITIES FOR INSTRUCTION.

There are ample collections of plates, photographs, models, specimens, preparations, apparatus, and instruments, for illustrating the different studies embraced in the course. Additions are made from time to time to these collections so that the members of the Faculty are able to adopt every new method of illustration, and to exhibit to the classes each year all important improvements in the way of instruments and apparatus that are employed in the practice of medicine and surgery, and to show their application.

The following paragraphs may serve to indicate the extent of some of these collections and the character of the work done in the several laboratories. For further information in regard to the University museums, laboratories, and libraries, see pages 20 to 31.

MUSEUM OF ANATOMY.

The museums of the late Professors FORD and SAGER, embracing several thousand specimens, the result of many years' labor in collecting and preparing materials intended to aid directly in teaching, are now the property of the university, and are used in the daily work of the class rooms. These museums contain a valuable collection of bones, illustrating healthy as well as diseased conditions, the various changes that occur from infancy to old age, and the processes of first and second dentition; dissections, general and partial, of the vascular, nervous, and muscular systems, both normal and abnormal; models of various portions of the body in wax, papier-maché, and plaster, illustrating morbid growths, skin diseases, etc.; preparations in the comparative embryology, neurology, and craniology of the vertebrata; in human embryology, in the anatomy and pathology of the diseases of women, etc. The collection of monstrosities, both single and double, of man and of the lower animals, is one of the largest in the United States.

ANATOMICAL LABORATORY.

The anatomical laboratory is admirably adapted for its purpose; the rooms are large, well lighted, and well ventilated.

The Anatomical Law of Michigan furnishes, without embarrassment, an ample supply of material for the purpose of practical anatomy. All students who have completed the requirements in descriptive and practical anatomy, pursue a course in operative surgery upon the cadaver.

MUSEUM OF MATERIA MEDICA.

The museum of materia medica consists of a fairly complete collection of the crude substances used in medicine along with their principal preparations and active principles. The drugs are arranged in groups convenient for study, importance being laid not on their origin but on

their action. The museum is also provided with several works of reference for the use of the students and with a number of graphic registrations of the action of drugs. It is open to students of the junior class at such hours as they arrange with the instructor.

CHEMICAL LABORATORY.

(See also page 27.)

The chemical laboratory provides thorough instruction and suitable appliances for the practical study of all branches of medical chemistry. In each of the two laboratory courses *required for graduation*, namely, qualitative chemistry (devoted to the study of chemical changes and incompatibilities), and analysis of urine (applied to clinical uses and physiological study), students are taken in sections of limited number for daily drill in the class room to direct the daily practice in the laboratory. Before beginning laboratory work the student takes a preparatory course, with daily recitations, in chemical notation, and at the close of the work in each course is held to an examination.

ELECTROTHERAPEUTICAL LABORATORY.

The laboratory of electrotherapeutics is supplied with apparatus for illustrating all the various methods for generating electric currents, and for measuring currents, voltages, and resistances.

The students are furnished materials from which they construct batteries, induction coils, cautery knives, electrodes, and other appliances, and, with these, experiments in electrophysics, electrophysiology, and electrotherapeutics are conducted.

It is the aim in this laboratory instruction to make the student practically familiar with the faults and the essential requirements of all forms of electrical apparatus made use of for therapeutical purposes.

PHYSIOLOGICAL LABORATORY.

The apartments provided for the physiological laboratory offer excellent facilities for practical work, whether of class instruction or of original investigation. A large and well-lighted room is appropriated chiefly to the use of undergraduate students, who perform under the direction of instructors most of the fundamental physiological experiments. The subjects commonly embraced in the practical course relate to the physiology of the nerves and muscles, reflex action, circulation, respiration, and digestion. A smaller room is devoted to advanced work and original investigation. The laboratory has a good supply of apparatus, tools, etc., and is open daily for physiological experiment and research.

HISTOLOGICAL AND EMBRYOLOGICAL LABORATORY.

This laboratory is well supplied with microscopes, microscopical accessories, microtomes, imbedding apparatus, and other instruments

used in histological and embryological work. During his term of instruction in the laboratory each student is furnished with microscopical reagents, a microscope, and a table for his own use, so that the practical work is carried out by each individual for himself. In the elementary course in histology an effort is made to teach the student the use of the microscope, the methods of teasing, the methods of mounting paraffine and celloidine sections, and the use of a number of the more commonly employed stains.

During his stay in the laboratory the student makes about one hundred and fifty preparations, and he is required to sketch them all as he makes them. These preparations are so arranged as to furnish him with specimens of typical cells and cell division, of all the elementary tissues, of the various glands and organs of the body, of the epidermis, of the central and peripheral nervous system, and of the sensory end-organs and the special senses.

In the course on microscopical technique, which is open only to those who have completed the elementary work, the student is instructed in the various methods of hardening, staining, imbedding, section-cutting, and injecting, the special methods of staining and counting red and white blood cells, and the use of the microscope in forensic medicine.

An optional laboratory course in the embryology of the salamander, the chick, and mammalia is offered, which is open to students who have completed the elementary work in histology and a course in microscopical technique, and have attended lectures in embryology. There is also an optional laboratory course in the microscopic anatomy of the brain and the special senses.

PHARMACOLOGICAL LABORATORY.

The pharmacological laboratory is situated in the medical building and consists of two chief rooms, one of which is used for chemical, the other for experimental, pharmacology. Each laboratory is supplied with apparatus and materials for original work in either branch of research, and any student or graduate receives every encouragement in the prosecution of such work. Among the apparatus recently introduced into this laboratory may be mentioned Runne's kymographion with endless paper, two sets of revolving drums, artificial respiration apparatus driven by an electric motor, time markers and signals (electric and clock-work), batteries and secondary coils, centrifugal and "shaker" apparatus, balances, combustion furnaces, etc.

PATHOLOGICAL LABORATORY.

The pathological laboratory is furnished with microscopes made by R. & J. Beck, the Bausch & Lomb Optical Co., Leitz, and Zeiss, adapted for every requirement. There is also a special microscope with apochro-

matic object glass, by Zeiss, for high-power work. There is an ample supply of material for the study of pathological histology, and all necessary stains and reagents, microtomes, etc.

The required course in pathological histology extends over six weeks, five afternoons a week. The student studies the histology of morbid processes in fresh and in hardened, in stained and in unstained, specimens, and is required to demonstrate his knowledge by drawings and descriptions of the specimens and by frequent examinations. The course includes the study of all the important alterations of the circulation and of nutrition, tumors and infectious diseases, and the more important diseases of organs. Material, reagents, microscopes, etc., are furnished by the laboratory.

Students who have taken the required course can do special work in this branch. An abundance of material is available for the purpose, and reagents and apparatus are furnished by the laboratory. Physicians wishing to take special courses, or to work up material of their own, can make arrangements for so doing and will be offered every facility.

Autopsies.—Post-mortem examinations of all available cases are made before the senior class, and selected students assist at each examination. Sections of the senior class are also instructed in the methods of making post-mortem examinations. No stated times can be set for this instruction, but every student is expected to take part in a post-mortem examination before presenting himself for the final examination in the course in pathology.

HYGIENIC LABORATORY.

The hygienic laboratory has a large room devoted to bacteriological work, containing all of the improved apparatus employed by Koch. The course in bacteriology extends through three months and requires four hours daily in the laboratory for this time. All the known pathogenic and the most important non-pathogenic germs are studied. The microscopes used are those of Zeiss and Leitz. All animals needed for experimentation are supplied by the laboratory. There are also courses in the chemical and bacteriological examination of drinking water, and in the study of food adulterations. Besides these, advanced students who wish to do practical work in the study of ptomaines and leucomaines are accommodated.

The objects had in view in the establishment of this laboratory were as follows: (1) original research as to the causation of disease; (2) sanitary examination of food and drink; (3) instruction to students.

Besides the large bacteriological room, there are rooms fitted especially for gas analysis and water analysis, and private rooms for original research. There are also a cold chamber, a disinfecting chamber, and an animal room.

MUSEUM OF NATURAL HISTORY AND LIBRARY.

Students in medicine have access to the botanical, zoological, and geological cabinets of the University, estimated to contain 255,000 specimens. The Medical Library contains 6,815 volumes. The General Library, containing 79,342 volumes, is also open to all students. A complete catalogue, arranged both by authors and by subjects, is accessible to readers. The leading medical periodicals of this country and of Europe are taken and kept on file.

THE UNIVERSITY HOSPITAL.

The University Hospital accommodates a large number of patients, is thoroughly equipped, and is in the immediate charge of a competent house physician and surgeon. It is under the direction of the Faculty, who attend regularly upon the patients (each upon such cases as come within his special department) and give clinical instruction in the wards to advanced students. In connection with the hospital there is a spacious clinical amphitheatre where clinics are regularly held every day during the college year, for medical, surgical, gynecological, ophthalmological, neurological, dermatological, and venereal cases, at which time examinations are made, prescriptions given, and surgical operations performed in the presence of the class.

It is the aim of the Faculty to make instruction in clinical medicine systematic and thorough, and this they are enabled to do by an abundance of interesting cases which present themselves. The number of patients treated and operated upon in the hospital each year is more than 1,500. Each student, therefore, may see, during his two clinical years, more than 3,000 patients, many of whom present more than one abnormality. Patients are utilized for teaching purposes more thoroughly than can be done in many hospitals. The University Hospital exists for the purpose of affording clinical material and every patient is utilized, but this does not detract in any manner from the benefit which the patient may receive. Students are required to take the history and keep a record of patients, and, under proper supervision, are offered an opportunity of personally examining the patients. Senior students are required to dress wounds and give other detailed attention to patients assigned them. Stress is laid upon the value of ward and bedside instruction. A small room in the hospital is furnished with laboratory appliances and here the student is required to make practical application of the knowledge which he has previously acquired in the scientific laboratories.

A lying-in ward is established in which senior students are given an opportunity to attend cases of labor, and become familiar with the duties

of the lying-in room, under the immediate direction of the professor of obstetrics and his assistant.

- For the treatment of diseases of the nervous system the hospital is furnished with apparatus for generating all kinds of electric currents. Attendants especially skilled in the application of electricity and massage are put in charge of such cases.

A large portion of the cases admitted to the hospital are from a distance and are of more than common interest, including many cases of chronic diseases of the lungs, the heart, and the nervous system.

Under the present organization, patients are much better accommodated, and clinical instruction is rendered more systematic and efficient than was formerly possible. The expenses to patients are only for their board, for unusual appliances or special nursing, and for medicines, the services of the Faculty being rendered gratuitously to those made available for clinical instruction.

Patients who desire to enter the hospital are requested to write to the Superintendent of the University Hospital to ascertain if there is room for their accommodation, and to obtain a circular giving more fully the rules governing admission. No contagious diseases are admitted.

Training School for Nurses.—In connection with the Hospital there has been established a training school for nurses under the charge of a competent and experienced matron. The term of study and service extends through two years, at the expiration of which time those who have proved themselves worthy are granted a certificate of graduation. For further information in regard to this school, application may be made to the Superintendent of the Hospital.

TEXT-BOOKS AND BOOKS OF REFERENCE.

A list of text-books and books of reference recommended is given in the special Announcement of the Department. The student who begins a course of reading without an instructor, is recommended to devote the most of his time for the first year to the elementary branches, anatomy, physiology, and general and medical chemistry.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

* The Matriculation Fee and the Annual Fee must be paid in advance, and no student can select his seat until after such payment. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.

Diploma Fee.—For all alike, *ten dollars*. •

Laboratory and Demonstration Courses.—The required laboratory and demonstration courses cost approximately as follows:

Anatomy.....	\$20 00
Chemistry.....	15 00
Bacteriology.....	15 00
Physiological Chemistry.....	15 00
Histology.....	5 00
Electrotherapeutics.....	8 00
Pathology.....	10 00
Operative Surgery.....	10 00
Demonstration Course in Medicine.....	10 00
“ “ “ Obstetrics.....	10 00
“ “ “ Nervous Diseases.....	10 00
“ “ “ Laryngology and Ophthalmology.....	10 00

* A deposit of the amount indicated for each of the above is required before the work of the course is begun.

Graduate Courses.—A fee of *ten dollars* is charged to graduate students for each course taken, in addition to the ordinary laboratory expenses of the course.

The total amount of fees paid to the University during the whole four years' course, for matriculation, incidental expenses, materials used, and diploma, is, for Michigan students, about \$290.00; and for others, about \$345.00, varying a little with the student's actual laboratory expenses.

For additional information in regard to expenses see page 35.

Department of Law.

A special Announcement giving further information in regard to this Department is published annually. For copies of this Announcement, or for other information relating to the Department, address the Dean of the Department of Law, Ann Arbor, Michigan.

The Department of Law was opened in 1859. Its growth and influence have been marked. From the first it has been the constant endeavor of the Faculty to furnish facilities for legal training equal to any attainable elsewhere in the country. And no effort will be spared to make the Department in the future deserving of a continued and increasing prosperity. The Faculty is composed of both resident and non-resident members. The resident members, eleven in number, devote themselves regularly and continuously to the work of instruction. The non-resident members, four in number, are engaged in practice, but meet their classes each week on designated days. In addition to the instruction by the regular staff, which covers all the fundamental and ordinary branches of the law, provision is made for several courses by specialists upon such subjects as International Law, Comparative Constitutional Law, Constitutional History, the Interstate Commerce Act, Admiralty Law, Medical Jurisprudence, Injunctions and Receivers, Mining Law, Patent Law, and Copyright Law. There are thirteen special lecturers, and each of the special courses consists of from six to fifteen lectures.

The department is housed in a spacious building that is devoted exclusively to its use. A large addition has recently been made to the structure, which is now ample in its accommodations and admirably adapted for law-school work.

The college year extends from the first day of October to the Thursday following the last Wednesday in June.

DIRECTIONS TO APPLICANTS FOR ADMISSION.

Before applying for admission to the Department, or to the entrance examination, the applicant is required to present to the Dean of the Department, at his office in the Department Building, the Treasurer's receipt for payment of the matriculation fee and the annual fee. It is essential, therefore, that an applicant for admission should apply first to the Steward of the University at his office in University Hall, register his name as a student in the Department of Law, and pay his fees to the Treasurer. He is then entitled to apply for admission, and in case of rejection, the money paid preliminary to the examination will be refunded by the Treasurer.

REQUIREMENTS FOR ADMISSION.

[For admission to advanced standing, see page 166].

[For admission of special students, see page 167].

[For admission to the graduate class, see page 166].

The requirements for admission to the Department of Law have been recently raised, but the additional requirements do not go into effect until the opening of the University year in 1897. The requirements in force for the examinations to be held in 1896, and as they will be in 1897, are given below.

REQUIREMENTS FOR ADMISSION IN 1896.

Applicants for admission to the first year class must be at least eighteen years of age, to the second year class, nineteen, and to the third year class, twenty. Applicants for admission to the graduate class must be at least twenty years of age. Special students must be at least nineteen years of age.

Graduates of universities or colleges, matriculates of universities or colleges, and students who have completed an academical or high school course approved by the Faculty, are admitted to the Department without examination as to preliminary acquirements, and may become candidates for a degree. In order to be entitled to this privilege, however, the applicant should present to the Dean of the Department evidence that he comes within some one of the classes named, which should be in the form of a diploma or certificate, or a certified copy thereof. All other applicants, if candidates for a degree, must pass satisfactory examinations in the following subjects: *Arithmetic, Grammar, Geography, Spelling, the Art of Composition, United States History, and English History*. Ransome's Short History of England, or Green's History of the English People, is recommended as affording the student a proper preparation for the examination in English History. The examinations are conducted in writing, and the applicant should come provided with the necessary materials.

REQUIREMENTS FOR ADMISSION IN 1897.

The conditions respecting age of applicants remain as stated above for the year 1896. The same classes of students, as in 1896, will also then be exempt from examination.

In September, 1897, and thereafter until further notice, all applicants, if candidates for a degree, except those who are exempt, as above explained, will be examined in the following subjects:

English Language, Composition, and Rhetoric.—The applicant will be required to write an essay of not less than two pages (foolscap), correct in spelling, punctuation, capital letters, grammar, and paragraphing. The topics for the essays, which will be such as the applicant is likely to be familiar with and from which he may make a selection, will be given at the time of the examination.

English Literature.—Stopford A. Brooke's Primer, or any other manual, may be used for an outline of the subject.

Mathematics.—*Algebra.*—To Quadratic Equations.

Plane Geometry.—As given in Olney's New Elementary Geometry, Beman and Smith's Plane and Solid Geometry, or an equivalent in other authors.

History.—Myers's General History, or an equivalent, Johnston's History of the United States, or an equivalent, and Ransome's History of England, or an equivalent.

Civil Government.—Fiske's Civil Government, Hinsdale's American Government (Parts I and II, especially the large print), or an equivalent.

It should be said that, while a competent degree of knowledge will be required, the examination will not be technical; and, further, that

applicants may be admitted to the Department conditionally, notwithstanding that they may be deficient in some subjects, in case such deficiencies are not so considerable as, in the judgment of the Faculty, to disqualify them for the performance of the work of the class to which they seek admission. All such deficiencies, however, must be made up before the end of the year, unless an extension of time is granted by the Faculty.

ADMISSION TO ADVANCED STANDING.

Applicants for admission to the second year class must be at least nineteen years of age, and to the third year class, twenty.

In September, 1896, and thereafter until further notice, the following classes of persons will be admitted to advanced standing without examination:

1. To the second year class:—*a.* Attorneys-at-law in good and regular standing. *b.* Persons who have satisfactorily completed one year's work in another law school of approved standing, and who bring proper certificates thereof.

2. To the third year class:—*a.* Persons who have received, in due course, the degree of Bachelor of Laws from an approved law school, maintaining an undergraduate course of not less than two years of nine months each. *b.* Persons who have satisfactorily completed two years' work in any approved law school maintaining an undergraduate course of three years of nine months each, and who bring the proper certificates thereof.

All other applicants for advanced standing in the undergraduate course will be received only upon examination. Before he can enter the examinations, the applicant must, unless exempt, pass the required preliminary examination for admission to the Department. He must, also, if he seeks admission to the second year class, show that he has studied law at least fifteen months, and if to the third year class, at least two years and a half, under some reputable practitioner or instructor. The evidence that he has complied with this requirement should be in the form of a certificate or letter from the practitioner or instructor with whom he has studied, and should be presented to the Dean of the Department. The applicant must then pass examinations upon the subjects in the course that have been taken by the class which he seeks to enter, or their equivalent. Under this regulation, he will be allowed to select the subjects for examination, but they must be the equivalent of those that have been taken by the class. He will receive credit for the subjects passed, and the examination will be final as to such subjects.

ADMISSION TO THE GRADUATE CLASS.

Applicants for admission to the graduate class must be at least twenty years of age.

In 1896, and thereafter until further notice, the graduate course will be open only to those who have received the degree of Bachelor of Laws from an approved law school, maintaining an undergraduate course of not less than three years of nine months each.

ADMISSION OF SPECIAL STUDENTS.

Persons who have been reading law for a considerable period before making application for admission to the Department, but whose reading, or preliminary preparation, has not been sufficiently extensive to bring them within the rules for admission to any class, are allowed, in exceptional cases, to become special students, with the privilege of pursuing a selected course of study, but without the privilege of being enrolled as candidates for a degree. They are permitted, under the guidance of the Faculty, to select subjects from the different courses. They must, however, satisfy the professors giving instruction in the subjects selected, that they are qualified to pursue the work with profit to themselves.

TIMES OF EXAMINATIONS FOR ADMISSION.

Examinations for admission will be held in the Department Building, September 28, 29, and 30, 1896, beginning at nine o'clock in the morning and at two o'clock in the afternoon of each day. The examination on the first of these days will have reference to general education. The examination on the other days will have reference to legal education, and will be confined to applicants for advanced standing. Applicants for advanced standing, unless exempt from the preliminary requirements, should be present at both of these examinations.

COURSE OF INSTRUCTION.

The course of instruction for undergraduates is a graded course, extending through three academic years of nine months each. The subjects upon which instruction is given, the time devoted to each subject, and the methods used, are described below.

FIRST YEAR.

Elementary Law. Two hours a week for the first semester. Text-book work accompanied by oral exposition. Class divided into two sections. Professor WILGUS.

Elementary Real Property. Two hours a week for the second semester. Text-book work accompanied by oral exposition. Class divided into two sections. Professor HUTCHINS.

Contracts and Quasi-Contracts. Three hours a week for the first semester and two for the second. Text-book and cases. Class divided into two sections. Professor KNOWLTON.

Criminal Law and Procedure. Two hours a week for the year. *First Semester.* Lectures on Criminal Law. Professor KNOWLTON. *Second Semester.* Text-book on Criminal Pleading and Procedure. Class divided into two sections. Mr. JOHNSON.

Torts. Two hours a week for the year. *First Semester.* Text-book and cases. Class divided into two sections. Professor WILGUS. *Second Semester.* Lectures. Professor CHAMPLIN.

Domestic Relations. Two hours a week for the first semester. Lectures. Professor ANGELL.

Husband and Wife. Two hours a week for the second semester. Lectures. Professor KNOWLTON.

Personal Property. One hour a week for the year. Lectures. Professor GRIFFIN.

Common Law Pleading. One hour a week for the second semester. Text-book. Class divided into two sections. Mr. JOHNSON.

Evidence. One hour a week for the second semester. Text-book. Class divided into two sections. Professor WILGUS.

SECOND YEAR.

Agency. Two hours a week for the first semester. Lectures and cases. Professor MECHEM.

Partnership. Two hours a week for the second semester. Lectures and cases. Professor MECHEM.

Bills of Exchange and Promissory Notes. Two hours a week for the first semester. Text-book and cases. Class divided into two sections. Mr. JOHNSON.

Bailments and Carriers. Two hours a week for the second semester. Lectures. Professor KNOWLTON.

Civil Pleading and Procedure at Common Law. Two hours a week for the first semester. Lectures. Professor GRIFFIN.

Code Pleading. Two hours a week for the first semester. Text-book. Class divided into two sections. Mr. JOHNSON.

Real Property, Including Fixtures, Easements, and Landlord and Tenant. Two hours a week for the year. Lectures. Professor THOMPSON.

Equity Jurisprudence. Two hours a week for the first semester. Text-book, lectures, and cases. Professor HURCHINS.

Equity Pleading and Procedure. Two hours a week for the second semester. Lectures. Professor THOMPSON.

Corporations. Two hours a week for the second semester. Text-book and cases. Class divided into two sections. Professor WILGUS.

Evidence. Two hours a week for the second semester. Lectures. Professor GRIFFIN.

THIRD YEAR

Constitutional Law. Two hours a week for the first semester. Lectures. Professor ANGELL.

Corporations. Two hours a week for the second semester. Lectures. Professor CHAMPLIN.

Jurisprudence of the United States. One hour a week for the year. Lectures. Professor GRIFFIN.

Damages. Two hours a week for the first semester. Lectures and cases. Professor MECHEM.

Extraordinary Legal Remedies. Two hours a week for the second semester. Text-book. Class divided into two sections. Mr. JOHNSON.

Equity Jurisprudence. Two hours a week for the year. Lectures and cases. Professor HUTCHINS.

Wills and Administration. Two hours a week for the first semester. Lectures and cases. Professor MECHEM.

Private International Law. Two hours a week for the second semester. Lectures. Professor KIRCHNER.

Assignments for the Benefit of Creditors and Fraudulent Conveyances. One hour a week for the second semester. Lectures. Professor KNOWLTON.

Suretyship and Mortgage. Two hours a week for the first semester. Lectures. Professor THOMPSON.

The Science of Jurisprudence. Two hours a week for the second semester. Lectures or text-book. Professor MECHEM.

RECITATIONS AND EXAMINATIONS.

For all text-book work, each class is divided into at least two sections. Whenever a subject is taught by lecture, the professor giving the instruction holds frequent and usually daily examinations upon ground covered by previous lectures. Additional quiz work upon the lectures is also given by the instructors. For this purpose the classes are divided into several sections, and the students are required to recite upon the lectures after the manner adopted in text-book instruction. Each section meets an instructor weekly for at least two exercises of one hour each. The size of the sections is such that each student can be examined at every exercise.

At the end of each semester one week is set apart for the thorough examination of all students upon the work of the semester. The examinations are in writing, and are final as to the work of the semester.

THE PRACTICE COURT.

It has been an objection frequently urged against the completeness of the training given in law schools that the student acquired no knowledge of actual practice. This objection has been entirely removed by the

introduction of the Practice Court recently established in this Department. The Practice Court is a part of the Department and is presided over by the professor of practice, while other members of the Faculty coöperate in conducting it. Its work is divided into three parts, that of the law term, that of the jury term, and that of appellate jurisdiction. The court is provided with a full corps of officers including the member of the Faculty who may sit from time to time as presiding judge, the full bench of judges sitting as a Supreme Court, a clerk, sheriff, and the necessary deputies. Ample and commodious rooms have been provided for the use of the court, including a large court room fitted up with all of the furniture and fittings necessary for the trial of jury cases, jury rooms, and a clerk's office. The latter is provided with all the books and records used in actual practice and a full supply of the blanks in common use in the several states.

The purpose of the court is to afford to the student practical instruction in pleading and practice both at law and in equity, under the common law system and the "code" or "reformed" procedure, and actual experience in the commencement and trial of cases through all their stages. In commencing the actions, the students assigned to the case are permitted to select the state in which the action shall be supposed to be brought, thus enabling the student to acquire the practice as prevailing in his own state. All questions of practice, pleading, and procedure are governed by the law of the state in which the action is so laid, but questions of substantive law are determined according to the weight of authority.

Two classes of cases are presented:

First. Cases arising upon given statements of fact, prepared and assigned by the Faculty, upon which process is to be issued, pleadings framed, and the cause conducted to an issue, when it is argued and disposed of as a question of law upon the facts admitted. This class of cases affords the student practical experience in the commencement of suits, and the preparation of pleadings and the argument of the questions of law arising upon the facts. The practice and pleadings are under the common law or the code procedure as the students may elect. There are two public hearings in this course: *a.* The questions arising upon the pleadings, are argued and disposed of at a regular session of the court presided over by the professor of practice. *b.* After the pleadings have been approved, the case is set down for a separate hearing upon the questions of law. This argument is heard either by the professor of practice or that member of the Faculty who has charge of the instruction upon the subject involved. When the issues so arising have been satisfactorily disposed of, the student is given credit for the first course.

Second. Actual controversies are arranged and assigned for trial as issues of fact. The course includes the entire conduct of an actual case from its beginning to a final judgment in the Supreme Court. This involves the issue of proper process, the preparation and filing of appropriate pleadings, the subpoenaing of the witnesses, the impanelling of a jury, the examination and cross-examination of witnesses, the arguments to the court and jury, and all the other incidents of a contested trial.

For the purpose of this work the class is divided into sections, and the work of attorneys, witnesses, jurors and the like is performed by the students. A member of the Faculty presides at these trials, which are conducted with all the dignity and decorum of actual practice. Upon the satisfactory completion of the course, credit is given for it.

Every member of the senior class who is a candidate for a degree will be expected to take part in both courses, and to perform all the incidental duties which may be required of him. Satisfactory completion of both courses will be a condition precedent to a degree.

The Practice Court supersedes the Moot Courts formerly conducted in the Department.

ELOCUTION AND ORATORY.

It is important for those who study the law with the view of becoming advocates, that they should give attention to the subject of forensic eloquence, the better to equip them for the performance of their duties as advocates. It is a mistake to suppose that excellence in speaking is simply a gift of nature, and not the result of patient and persistent labor and study.

The following courses, given by Professor TRUEBLOOD, are optional; but, when a student has elected a course, he is required to complete it. Failure to do so will affect his standing at graduation.

FIRST SEMESTER.

1. Elocution. Exercises in vocal culture, breathing, position, and gesture; emphasis; elements of quality and force of voice, with their application to choice passages from the orators.

3. Oral Discussions. Designed to develop readiness of extemporization. Practical application of the principles of formal logic. Leading questions of the day debated in class. Lectures on argumentation and persuasion.

Course 3 must be preceded by Courses 1 and 2 and requires a knowledge of elementary logic.

SECOND SEMESTER.

2. Elocution. Exercises in vocal culture, continued; principles of action; elements of pitch and time, with their application to representative selections.

4. Study of Forensic Orators and Oratory. Topical speeches. Lectures on methods of public address and sources of power of the orator; study of representative orations.

Course 4 must be preceded by Courses 1 and 2.

THE GRADUATE COURSE.

The following course of study is pursued by candidates for the degree of Master of Laws:

Public International Law. Theses are required on topics assigned.
President ANGELL.

History of Treaties. President ANGELL.

History of Real Property Law. Seminary work, based on Digby's History of the Law of Real Property. Professor THOMPSON.

The Law of Railways. Professor KNOWLTON.

Elections and the Appointment and Removal of Public Officers.
Professor MECHEM.

The Railroad Problem. Professor ADAMS.

Comparative Constitutional Law. Lectures on the institutions of Germany, France, and other continental states, with a study of works on the English Constitution. Professor HUDSON.

Advanced Course in Constitutional Law and Constitutional History.
Professor McLAUGHLIN.

The Inter-State Commerce Act. Professor T. M. COOLEY.

Admiralty Law. Judge SWAN.

The Law of Insurance. Dr. BIGELOW.

Medical Jurisprudence. Dr. EWELL.

Injunctions and Receivers. Dr. HIGH.

Toxicology in its Legal Relations. Dr. VAUGHAN.

Mining Law. Mr. CLAYBERG.

Patent Law. Mr. LOTHROP.

Copyright Law. Mr. REED.

Roman Law. Mr. MEADER.

Taxation. Professor MECHEM.

Judicial Sales. Professor KNOWLTON.

Students recite and are examined on the subjects enumerated above, and, in addition, are required to prepare a thesis on some subject approved by the Faculty, which thesis must be submitted at least two months prior to Commencement.

The members of the undergraduate classes are not allowed to attend the lectures given to the graduate students, except that members of the

senior, or third year, class may attend, if they desire, the lectures on mining law, and patent law. Graduate students are, however, allowed to attend the lectures given to undergraduates.

REQUIREMENTS FOR GRADUATION.

THESES.

Each candidate for a degree is required to prepare and deposit with the Faculty a dissertation, not less than forty folios in length, upon some legal topic selected by himself and approved by some member of the Faculty. The dissertation must be satisfactory in matter, form, and style; and the student presenting it must hold himself in readiness to be examined upon the subject. It must be printed, on a typewriter or otherwise, and a copy left with the Department. Special rates can be obtained for doing this work, and two or three dollars will cover the expense of printing and binding. In special cases the Faculty will not insist on the printing, if it should appear to be a burden to a needy student.

The theses of candidates for the degree of Bachelor of Laws must be presented before the beginning of the second semester of the last year of the course. The theses of graduate students must be submitted at least two months prior to commencement.

THE DEGREE OF BACHELOR OF LAWS.

Students who have received the full course of instruction, performed all required exercises, and passed the regular examinations, are admitted to the degree of Bachelor of Laws. Students admitted to advanced standing are entitled to all the privileges of the class of which they become members.

THE DEGREE OF MASTER OF LAWS.

The degree of Master of Laws is conferred on any graduate of this Department, who pursues the study of Law in this University for one year after graduation, and who completes to the satisfaction of the Law Faculty such a course of study as may be required; and the privilege thus extended to graduates of this Department is also extended to the graduates of other law schools who are entitled under the foregoing rules to advanced standing as members of the graduate class.

CERTIFICATES OF ATTENDANCE.

When a person is connected with the school for a period not entitling him to graduate, he may, on application to the Dean of the Department, receive an official certificate of attendance, which states the time of his attendance and the degree of his attainment.

LIBRARIES.

The Law Library contains 11,805 volumes, and includes the reports of every State in the Union, the reports of the Federal Courts, and a very excellent collection of the English, Irish, and Canadian reports. In addition to reports, the library contains an extensive collection of treatises and text-books, both English and American, and copies of the statutes of the several States and of the United States. New reports, as they are issued, are added, as are new text-books and treatises of merit. The library is also well supplied with sets of leading cases and of legal periodicals. The Journal of Jurisprudence (Edinburgh), the Law Quarterly Review (London), the American Law Review, the American Law Register, the Criminal Law Magazine, the Albany Law Journal, the Central Law Journal, the Juridical Review, the Green Bag, the Michigan Law Journal, and the Federal Reporter, are regularly taken and kept on file.

The library was enriched some years ago by the gift of the valuable law library of the Honorable Richard Fletcher, formerly one of the Justices of the Supreme Court of Massachusetts.

The late Honorable C. H. Buhl, of Detroit, by his will bequeathed to the University for the Law Library, the sum of ten thousand dollars. This gift, which is now available and is to be used at once in the purchase of books, will add materially to the value and efficiency of the large collection of reports and text-books presented to the library by Mr. Buhl a few years ago, and known as the Buhl Law Library. It enables the Department to provide for its students library facilities that are second to none in the country.

The library is open for consultation by students from 8 A. M. to 12 M., from 1:30 to 5:30 P. M., and from 7 to 10 P. M., during the academic year, except on Saturday afternoons and evenings. Students are not permitted to take the books from the library building, but during the hours named are allowed free access to them.

The General Library of the University (see page 20) is also open to use by students in the Department of Law.

WORK IN THE DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.**CONSTITUTIONAL HISTORY AND POLITICAL SCIENCE.**

It seems to be conceded now that the law should be studied in a law school, and that the law school should be connected with a university,

COURSES OF STUDY.

During the summer of 1896, the following review courses of study will be given:

- Elementary Law.* Smith's Elementary Law. 15 hours, June 29-July 17. Mr. SMITH.
- Elementary Real Property.* Blackstone's Commentaries, Book II. 15 hours, August 3-21. Mr. JOHNSON.
- Contracts.* Anson on Contracts. 20 hours, June 29-July 17. Professor KNOWLTON.
- Criminal Law.* Washburn on Criminal Law. 10 hours, August 10-21. Mr. JOHNSON.
- Torts.* Cooley's Elements of Torts. 20 hours, July 20-31. Professor WILGUS.
- Domestic Relations.* Browne's Domestic Relations. 15 hours, July 27-August 7. Mr. HUGHES.
- Personal Property.* Smith's Personal Property. 15 hours, July 6-24. Mr. SMITH.
- Common Law Pleading.* Shipman's Common Law Pleading. 15 hours, August 3-21. Mr. DWYER.
- Agency.* Huffcut's Agency. 10 hours, July 20-31. Mr. SMITH.
- Partnership.* Lectures. 10 hours, June 29-July 10. Mr. HUGHES.
- Bailments.* Lectures. 10 hours, July 13-24. Professor KNOWLTON.
- Bills and Notes.* Norton's Bills and Notes. 15 hours, Aug. 3-21. Mr. JOHNSON.
- Real Property, Fixtures, etc.* Lectures. 15 hours, July 20-31. Professor THOMPSON.
- Equity Jurisprudence.* Lectures. 15 hours, July 6-17. Professor THOMPSON.
- Equity Pleading.* Thompson's Equity Pleading. 10 hours, August 3-14. Mr. DWYER.
- Evidence.* Reynolds's Theory of Evidence. 15 hours, June 29-July 10. Mr. HUGHES.
- Constitutional Law.* Cooley's Principles of Constitutional Law. 15 hours, August 3-21. Mr. DWYER.

FEES IN SUMMER SCHOOL.

The fee is \$35.00 for a course of 100 hours or over, subject to the limitation that no student is permitted to take more than twenty hours a week without special permission of the Faculty, and then only on the terms designated in each particular case. For the work in particular subjects the fees are \$4.00 for 10-hour subjects; \$6.00 for 15-hour subjects; and \$8.00 for subjects. All fees are payable strictly in advance.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.

Diploma Fee.—For all alike, *ten dollars*.

For additional information in regard to expenses see page 35.

SUMMER SCHOOL OF LAW.†

A Summer School of Law, conducted by members of the Law Faculty, opens Monday, June 29, 1896, continues eight weeks, and closes Friday, August 21.

The object of the school is to give a thorough review of the leading topics of the law, designed especially for those who wish to take examinations for admission to the bar, or for advanced standing in the regular courses in law schools.

The first eight subjects in the schedule given below are those usually found in the first year of regular three-year law courses, while the remainder comprises the leading subjects of the second year. The courses designated are, therefore, divided into two classes,—one of first-year subjects, and one of second-year subjects,—of about 125 hours each, or three hours per day for each class during the eight weeks. These classes are arranged so there is no conflict of subjects, and students can elect such subjects as they desire without limitation, except that no one is permitted to take more than twenty hours a week without special permission of the Faculty.

ADMISSION.

No examinations for admission are held, but students should bring letters of introduction, and such certificates of work done as will enable the Faculty to give proper advice as to subjects to be selected, etc. Each student should register with the Steward of the University, pay his fees to the Treasurer, and then report to the Secretary of the Department of Law.

*The Matriculation Fee and the Annual Fee must be paid in advance, and no student is allowed to select his seat until after such payment. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

†A special Announcement will be sent, and further particulars given, upon application to Mr. E. F. Johnson, Secretary of the Faculty.

COURSES OF STUDY.

During the summer of 1896, the following review courses of study will be given:

- Elementary Law.* Smith's Elementary Law. 15 hours, June 29-July 17. Mr. SMITH.
- Elementary Real Property.* Blackstone's Commentaries, Book II. 15 hours, August 3-21. Mr. JOHNSON.
- Contracts.* Anson on Contracts. 20 hours, June 29-July 17. Professor KNOWLTON.
- Criminal Law.* Washburn on Criminal Law. 10 hours, August 10-21. Mr. JOHNSON.
- Torts.* Cooley's Elements of Torts. 20 hours, July 20-31. Professor WILGUS.
- Domestic Relations.* Browne's Domestic Relations. 15 hours, July 27-August 7. Mr. HUGHES.
- Personal Property.* Smith's Personal Property. 15 hours, July 6-24. Mr. SMITH.
- Common Law Pleading.* Shipman's Common Law Pleading. 15 hours, August 3-21. Mr. DWYER.
- Agency.* Huffcut's Agency. 10 hours, July 20-31. Mr. SMITH.
- Partnership.* Lectures. 10 hours, June 29-July 10. Mr. HUGHES.
- Bailments.* Lectures. 10 hours, July 13-24. Professor KNOWLTON.
- Bills and Notes.* Norton's Bills and Notes. 15 hours, Aug. 3-21. Mr. JOHNSON.
- Real Property, Fixtures, etc.* Lectures. 15 hours, July 20-31. Professor THOMPSON.
- Equity Jurisprudence.* Lectures. 15 hours, July 6-17. Professor THOMPSON.
- Equity Pleading.* Thompson's Equity Pleading. 10 hours, August 3-14. Mr. DWYER.
- Evidence.* Reynolds's Theory of Evidence. 15 hours, June 29-July 10. Mr. HUGHES.
- Constitutional Law.* Cooley's Principles of Constitutional Law. 15 hours, August 3-21. Mr. DWYER.

FEES IN SUMMER SCHOOL.

The fee is \$35.00 for a course of 100 hours or over, subject to the limitation that no student is permitted to take more than twenty hours a week without special permission of the Faculty, and then only on the terms designated in each particular case. For the work in particular subjects the fees are \$4.00 for 10-hour subjects; \$6.00 for 15-hour subjects; and \$8.00 for 20-hour subjects. All fees are payable strictly in advance.

School of Pharmacy.

A special Announcement giving further information in regard to this School, and containing a register of residences and occupations of the alumni, revised each year so as to constitute a full professional directory, is published annually. For copies of this Announcement, or for other information relating to the School, address Professor A. B. Stevens, Secretary of the Faculty, or the Dean of the School of Pharmacy, Ann Arbor, Michigan.

THE School of Pharmacy gives training for all branches of pharmacy and for various chemical pursuits. It provides a well-grounded preparation for service as a manufacturing chemist or as an analyst. The graduate is assured a thorough qualification for the prescription table, and for the most responsible positions in pharmacy. He is fitted to act as the chemist of the medical profession. In respect to the discipline of both the intellectual and the executive powers, the work of the School offers decided advantages, in the steady requirement of severe studies, and of exact operations, on the part of each student.

The school year extends from the first day of October to the Thursday following the last Wednesday in June. Students of the first year are released the second Friday before Commencement. For special purposes admission may be granted at the beginning of the second semester, February 22, 1897. For the full regular work admission cannot be granted at any other time than at the opening of the first or the second semester, as students are instructed in classes in progressive order. For investigations, stu-

dents can be received at any time when there is room in the laboratories.

REQUIREMENTS FOR ADMISSION.

[For admission to advanced standing, see page 181].

[For admission of students not candidates for a degree, see page 181].

The requirements for admission vary in some particulars with the applicant's previous training in practical pharmacy, and with the course of study he intends to pursue. Two courses are offered: a two-year course, leading to the degree of Pharmaceutical Chemist; and a four-year course, leading to the degree of Bachelor of Science in Pharmacy. The requirements are described below in two divisions, according to the degree which the student desires to take.

THE DEGREE OF PHARMACEUTICAL CHEMIST.

Applicants for admission to the two-year course, leading to the degree of Pharmaceutical Chemist, must be at least eighteen years of age.

It will be of advantage to the applicant to obtain at least a year of practical training in a drug store before entering the School. The required work leaves the student no time for an engagement in a drug store during the school year.

ADMISSION WITHOUT EXAMINATION.

From High Schools.—Applicants holding diplomas of graduation from any of the full courses of the schools approved by the Faculty of the Department of Literature, Science, and the Arts, and included in the list on pages 47 to 50, are admitted without examination, as are, also, graduates of four-year courses of other high schools of good standing.

From Colleges.—Students who have completed at least one year's work in an approved college of literature and science, and who bring explicit and official certificates describing their course of study and scholarship and testifying to their good character, are admitted without examination. Graduates of colleges of medicine or of pharmacy are also admitted without examination.

ADMISSION ON EXAMINATION.

Applicants who bring evidence of having been engaged in the practice of pharmacy for at least two years are admitted on examination in the following branches:

English.—Exercises in the writing of English with correctness. Especial regard is paid to orthography, punctuation, the use of capitals, grammatical construction, and rhetorical fitness.

Mathematics.—*Arithmetic.*—Fundamental Rules, Fractions (common and decimal), Denominate Numbers, Percentage, Proportion, Involution and Evolution, and the Metric System of Weights and Measures. *Algebra.*—Fundamental Rules, Fractions, Equations of the First Degree containing two or more unknown quantities.

Latin or German.—In Latin, Jones's First Latin Book, or an equivalent amount in any other text-book. Instead of Latin, German to the extent of a full year's study is accepted. Those who have a speaking and reading acquaintance with German are held to an examination in the grammar.

Other applicants are examined in the following branches:

English.—The same as given above.

Mathematics.—*Arithmetic and Algebra.*—The same as given above. *Geometry.*—The Elements of Plane Geometry as given in Olney's New Elementary Geometry, Beman and Smith's Plane and Solid Geometry, or an equivalent in other authors.

Latin or German.—The applicant may offer (1) three years of preparation in Latin; or (2) two years in Latin and one year in German; or (3) one year in Latin and two years in German. Those who offer three years in Latin are examined in the *grammar*—a thorough preparation in the elements; in *Prose Composition*—Jones's Exercises in Latin Prose Composition, or an equivalent in some other text-book; and in *Reading*—four books of Caesar's Commentaries and six select orations of Cicero, or an equivalent amount in some other text-book. Those who offer two years of Latin are examined as above, except in the orations of Cicero. Those who offer one year of Latin are examined in an amount equivalent to Jones's First Latin Book. Those who offer one year of German should have had daily recitations on the grammar during that time, accompanied by weekly exercises in writing, and the reading of seventy-five pages of some German reader. Those who offer two years of German should have devoted one year to the reading of some complete work of literary art.

Physics.—Carhart and Chute's Elements of Physics, or an equivalent.

Botany.—Practical exercises in the study of common plants, so conducted as to secure a familiar acquaintance with the essential facts of

vegetable morphology, physiology, and relationship. The method pursued in Spalding's Introduction to Botany will indicate the kind of work desired. See page 39 for further information as to the extent of this requirement.

THE DEGREE OF BACHELOR OF SCIENCE IN PHARMACY.

The requirements for admission to the four-year course, leading to the degree of Bachelor of Science in Pharmacy, are and will be in every respect, whether on diploma or by examination, the same as the requirements for admission to the courses leading to the degree of Bachelor of Science in the Department of Literature, Science, and the Arts. The requirements in force for the year 1896 may be found on page 40; for 1897, on page 56. For the rules governing admission from diploma schools, and for a list of schools approved as qualified to prepare students for admission to the courses leading to the degree of Bachelor of Science, see pages 45 to 50. The rule relating to admission conditions, printed on page 112, applies also to students admitted to the four-year course in the School of Pharmacy.

ADMISSION TO ADVANCED STANDING.

Students who have gained admission to the School may apply for credit in any of the college studies which they have pursued in another college, or in a high school whose graduates are admitted. Such application should be made to the Dean at the time of entering the School, and will be referred to the professor in charge of the studies in which credit is asked. In each case the professor will determine how much credit, if any, can be given. To this end he may appoint a time for examination of the applicant upon the study. Applicants are desired to bring explicit credentials as to the work done.

Students in the four-year course, applying for advanced credit, will govern their applications according to the rules in force in the Department of Literature, Science, and the Arts (pages 42 to 44), though making their application to the Dean of the School of Pharmacy. Credits are received from the other departments, and from the Summer School, of this University. Not more than twelve hours of credit from the Summer School can be applied toward the degree of Bachelor of Science. Credits from other Schools of Pharmacy are adjusted separately for each study, as stated above. Owing to differences in the order and extent of the studies, credits cannot be accounted for in years of pharmaceutical college study.

ADMISSION OF STUDENTS NOT CANDIDATES FOR A DEGREE.

Persons over nineteen years of age who bring evidence of having been engaged in the practice of pharmacy for at least two years, may be

admitted to pursue selected studies upon passing the examination in English as stated on page 180. The same privilege is accorded to persons over twenty-one years of age who have had professional experience approved by the Faculty, whether it have been in pharmacy or in some other pursuit, the same examination being required as to the correctness of English writing.

Students admitted under the above provisions are not regarded as candidates for any degree, and they do not become eligible for graduation until they have passed all the examinations for admission to the course leading to the degree which they seek to obtain. To become eligible for graduation with the degree of Pharmaceutical Chemist, the student must pass the examination for admission required of those who have been engaged in the practice of pharmacy. To become eligible for graduation with the degree of Bachelor of Science, the student must meet the full entrance requirements of the course leading to that degree.

Students not candidates for a degree may select such studies as they are found prepared to pursue, under the regulations of the Faculty. Courses of selected studies are arranged for students, to suit their purposes and qualifications. Selected studies may be continued so long as, in the judgment of the Faculty, they are carried with success and profit.

TIMES OF EXAMINATION.

For Admission to the Two-Year Course.—An examination for admission will be held on Tuesday and Wednesday, September 29 and 30, 1896. The examination will begin at 9 A. M. on the first of the two days mentioned.

For Admission to the Four-Year Course.—The examination for admission will be held in connection with those of applicants for admission to the Department of Literature, Science, and the Arts (see page 44).

COURSES OF INSTRUCTION.

The courses of instruction comprise lectures, recitations, and laboratory work. The amount of work in each course is expressed in hours, an "*hour*" signifying one exercise a week during one semester. A lecture or recitation is usually one hour in length. A laboratory exercise employs three hours, more or less, being continued until the work assigned to one exercise, or a due proportion of the work assigned to the course, has been completed.

The satisfactory completion of one exercise a week during one semester, including a sufficient standing in the examination held at the end of the semester, entitles the student to one *hour of credit* towards graduation. It is expected that a lecture or a recitation, with the personal study necessary to maintain the student's standing in the subject, will take in all as much time as a laboratory exercise. Therefore an *hour of credit* is regarded as having the same value whether obtained in a course of lectures or in a course of laboratory exercises.

In the descriptive schedule that follows, the several courses in any subject are lettered in the order in which they are to be taken by the student. The numbers in brackets are numbers of similar or corresponding courses given in the Department of Literature, Science, and the Arts. A further description of these may be found on pages 85 to 94. The amount of credit towards graduation is indicated by the expressions *two hours*, *three hours*, etc.

PHARMACY.

COURSE A. Theory and Practice of Pharmacy. Lectures and recitations. *Three hours*. Second Semester. Assistant Professor STEVENS.

COURSE B. Operative Pharmacy and Pharmaceutical Preparations. Laboratory work and recitations. *Ten hours*. First Semester. Assistant Professor STEVENS.

Course B must be preceded by Course A in analytical chemistry.

COURSE C. Pharmaceutical Technology and Prescription Practice. Lectures and work at the prescription stand. *Four hours*. Second Semester. Assistant Professor STEVENS.

PHARMACOGNOSY.

MICRO-BOTANY, PHARMACOGNOSY, PHARMACOLOGY (MATERIA MEDICA).

COURSE A. Pharmacognosy and Organography. Practical Exercises. *Two hours*. First Semester. Assistant Professor NEWCOMBE and Mr. WILLIAMS.

COURSE B. Micro-botany. Lectures and laboratory work. *Three hours*. Second Semester. Assistant Professor NEWCOMBE.

COURSE C. Pharmacognosy. Practical exercises. *Two hours*. First Semester. Mr. WILLIAMS.

COURSE D. *Materia Medica*. Recitations and lectures. *Three hours*.
First Semester. Mr. WILLIAMS.

Course D may accompany Course C.

COURSE E. *Pharmacognosy*. Continuation of Course C. *Two hours*.
Second Semester. Mr. WILLIAMS.

COURSE F. *Materia Medica*. Continuation of Course D. *Three hours*.
Second Semester. Mr. WILLIAMS.

Course F may accompany Course E.

GENERAL CHEMISTRY.

COURSE A [Course 1]. *Elementary Inorganic Chemistry*, Descriptive and Experimental. *Three hours*. First Semester. Mr. HIGLEY.

COURSE B [Course 4]. *Inorganic Chemistry*, Descriptive and Experimental. Continuation of Course A. Lectures. *Four hours*.
Second Semester. Professor FREER.

COURSE AA. *Inorganic Chemistry*, Descriptive and Experimental. Lectures and quizzes. *Five hours*. First Semester. Professor FREER.

Course AA is a beginning course extending further than Course A.

COURSE C. *Physics*. Lectures. *Four hours*. Second Semester. Mr. LIGHTY.

ANALYTICAL CHEMISTRY.

QUALITATIVE ANALYSIS, QUANTITATIVE ANALYSIS, TECHNICAL ANALYSIS.

COURSE A [Course 1]. *Qualitative Analysis*. Laboratory work and recitations. *Ten hours*. Either First or Second Semester.
Professor JOHNSON.

Course A should be preceded or accompanied by a course in general chemistry.

COURSE B [Course 4]. *Quantitative Analysis*. Laboratory work, lectures, and recitations. *Seven hours*. Either First or Second Semester. Professor E. D. CAMPBELL.

Course B must be preceded by Course A.

COURSE C [Course 2]. *Advanced Qualitative Analysis*. Laboratory work and recitations. Continuation of Course A. *Five hours*.
Second Semester. Professor JOHNSON.

COURSE D [Course 5]. *Advanced Quantitative Analysis*. Laboratory work. *Five hours*. Either First or Second Semester. Professor E. D. CAMPBELL.

Course D must be preceded by Course B.

COURSE E [Course 6]. *Iron and Steel Analysis*. Laboratory work. *Five hours*. Either First or Second Semester. Professor E. D. CAMPBELL.

Course E is open to those who have completed Course B and have received special permission.

COURSE F. Water Analysis. Laboratory work and reading. *Three hours.* Either First or Second Semester. Dr. GOMBERG.

Course F must be preceded by Course B.

SHORTER COURSES IN QUALITATIVE CHEMISTRY FOR STUDENTS NOT CANDIDATES FOR A DEGREE.

(1) **Three Months' Course in Qualitative Chemistry.** Laboratory work and recitations. Begins October 1, January 7, March 30. The class sections are instructed by a graduate assistant under the direction of Professor JOHNSON.

(2) [Course 3]. **First Steps in Qualitative Analysis.** Laboratory work and recitations. Second Semester. Professor JOHNSON.

Course (2) constitutes about one half of Course A in analytical chemistry. It gives a little more analytical work than the three months' course.

ORGANIC CHEMISTRY.

INCLUDING ANALYTICAL AND APPLIED ORGANIC CHEMISTRY.

COURSE A [Course 10]. Carbon Compounds. Lectures. *Five hours.* First Semester. Professor PRESCOTT.

Course A must be preceded by a course in general chemistry and a course in analytical chemistry.

COURSE B [Course 11]. Organic Preparations. Laboratory work in organic synthesis. *Two hours.* Either First or Second Semester. Dr. GOMBERG.

Course B may accompany or follow Course A and may be taken in part, or extended, to make *one* hour or *three* hours of credit.

COURSE C [Course 12]. Organic Preparations and Ultimate Analysis. Laboratory work. *Five hours.* Either First or Second Semester. Professor PRESCOTT and Dr. GOMBERG.

Course C may accompany or follow Course A, either in addition to or instead of Course B. Courses B and C may be continued, each for the same time and the same additional credit and under the same teachers, in either semester, constituting respectively Course BB [11 a] and Course CC [13].

COURSE D. [Course 14]. Organic Analysis, and Drug Assaying. Laboratory work and lectures. *Five hours.* Second semester. Dr. GOMBERG.

Course D must be preceded by Course A and by a course in quantitative analysis.

COURSE DD. Sanitary and Commercial Organic Analysis. Laboratory work and reading. Continuation of, or alternative for, Course D. *Five hours.* Either First or Second Semester. Professor PRESCOTT and Dr. GOMBERG.

COURSE E. Toxicology. Inorganic and organic. Chemical and microscopical. Laboratory work and reading. *Three hours.* Professor PRESCOTT and Dr. GOMBERG.

Course E must be preceded by Course D.

BEGINNING COURSES IN ORGANIC CHEMISTRY IN SECOND SEMESTER.

(1) Organic Chemistry. Lectures. *Two hours.* Mr. TROWBRIDGE.

(2) [Course 28]. Organic Chemistry. Lectures. *Four hours.* Professor PRESCOTT.

Courses (1) and (2) are intended primarily for classes in other departments of the University, and are open to students in the School of Pharmacy only by special permission.

PHYSIOLOGICAL CHEMISTRY.

COURSE A. Analysis of Urine. Laboratory work and lectures. *Five hours.* Professor NOVY.

Course A is given three times a year, beginning October 1, January 7, March 30. It must be preceded by a course in qualitative analysis and a course in organic chemistry.

COURSE B [Course 7]. Physiological Chemistry, including the Analysis of Urine. Laboratory work and lectures. *Seven hours.* Either First or Second Semester. Professor NOVY.

Course B must be preceded by a course in qualitative analysis and a course in organic chemistry, and it is advisable that it be preceded by a course in quantitative analysis.

COURSE C [Course 2]. Bacteriology. Laboratory work. *Five hours.* Professor NOVY.

Course C is given three times a year, beginning October 1, January 7, March 30.

PHARMACOLOGY.

COURSE A. Laboratory work and reading. *Three hours.* Professor CUSHNY.

Course A must be preceded by Courses A and D in organic chemistry, and previous work in physiology would be of advantage. The course is open only to those who receive special permission.

COURSE B. Physiology. Lectures and recitations. *Five hours.* First Semester. Professor LOMBARD.

Course B must be preceded by a course in organic chemistry, and it is also desirable that the student have had studies in anatomy. The course is open only to those who receive special permission.

MINERALOGY.

COURSE A. Crystallography. Twelve lectures supplemented by practical exercises. Second Semester. Professor PETTEE.

COURSE B [Course 1]. Lectures and practice. *Two hours.* Either First or Second Semester. Professor PETTEE.

Course B should be preceded by a course in general chemistry. It includes Course A.

COURSE C [Course 2]. Lectures and practice. *Five hours.* Second Semester. Professor PETTEE.

Course C should be preceded by a course in general chemistry and a course in analytical chemistry. It includes Course B.

PHYSICS.

COURSE A [Course 1]. Mechanics, Sound, and Light. *Five hours.* First Semester. Assistant Professor REED.

Course A is open to those who have passed an entrance examination in physics, and to all others who have sufficient preparation. A knowledge of plane trigonometry is indispensable.

COURSE B [Course 2]. Electricity and Magnetism. Lectures. *Five hours.* Second Semester. Professor CARHART and Assistant Professor REED.

Course B must be preceded by Course A and by a course in general or analytical chemistry.

RESEARCH.

Courses in Research, in either the first or second semester, and under the provisions named below, are entitled to such *number of hours* of credit as shall be determined by the professor in charge of the work. In this determination the quality of the work is to be taken as a joint factor with the time it has employed.

A student, duly prepared by previous training, may be admitted to any work of investigation for which he may be suited, by permission of the professor in charge of the work, subject to the regulations of the School. The period of research is limited, for undergraduates, to the final semester in the two-year course, and to the senior year in the four-year course. Graduates of other colleges may enter at once upon research in this School. Holders of a Fellowship in this School must devote themselves wholly to research, and graduate students may do so if they desire. The research for a degree requires experimental work with the aim to obtain data not previously published. The indexing of chemical and pharmaceutical literature, in form for publication, is accepted as a necessary adjunct of research.

EXAMINATIONS.

The examination upon each course of instruction is held at the time the work of that course is completed. The examinations, therefore, are held mostly at the end of a semester, in February and in June.

The result of an examination is reported to the Faculty by the professor in charge, for each student enrolled, in terms as follows:

Passed.—Entitling the student to full credit for the course.

Conditioned.—Imposing some specified condition, usually to take another examination, the condition to be fulfilled before credit can be given.

Provisionally Passed.—Withholding the credit for the course until the student shall have done better work in other studies, in the judgment of the Faculty as a whole, who can change the record of Provisionally Passed to a record of Passed, or Conditioned, or Not Passed, whenever such change shall be justified by the scholarship of the student in his several studies.

Not Passed.—Requiring the student to go over the regular exercises of the study again before he receives another examination.

Absent.—With statement of the cause of absence; if the student have left the class, stating at what time; or stating if absent without excuse or explanation.

SUCCESSION OF STUDIES.

I. IN THE TWO-YEAR COURSE.

First Year, First Semester.—General Chemistry AA; Analytical Chemistry A (Qualitative); Pharmacognosy A.

First Year, Second Semester.—Analytical Chemistry B (Quantitative); Pharmacognosy B (Micro-botany); Pharmacy A; General Chemistry C (Physics).

Second Year, First Semester.—Pharmacy B (Laboratory and Lectures); Organic Chemistry A; Pharmacognosy C and D (Materia Medica).

Second Year, Second Semester.—Organic Chemistry D (Drug Assaying); Pharmacy C (Technology and Perscription Practice); Pharmacognosy E and F (Materia Medica); Mineralogy A (Crystallography); Research work.

The studies enumerated above are without exception required for the degree of Pharmaceutical Chemist. They constitute an amount of work which taxes the full working power of a student of average quickness and strength of scholarship. Students who desire a longer time for the same work may apply for it on entering college, or during the first semester, and obtain from the Faculty a distribution of all the work through five semesters, or six semesters, as found advisable in each case.

II. IN THE FOUR-YEAR COURSE.

The student is limited by rule to *sixteen hours* of credit (sixteen exercises a week) in each semester.

The student must present, at the beginning of each semester, his election of studies for that semester, using a blank provided for that purpose. The elections of studies are subject to approval of the Faculty, who will take action upon them without delay, and all further adjustments of studies are to be completed as early as the second Monday of the semester. The studies prescribed for graduation are given on page 190. All the studies of the School are open to election.

ADVISORY SEQUENCE OF STUDIES.

Students who enter the School prepared in Latin, in German, and in chemistry, as high school studies, are advised to arrange their work in accordance with the scheme printed below. Students who enter with French instead of German, or without chemistry, are advised, in general, to follow the same scheme, with such modifications as may be necessary. Courses [A] and [B] in French are given in the Department of Engineering (page 135).

First Year, First Semester:—Mathematics [1 a], three hours; Physics [1], five hours; German, two hours; Pharmacognosy A, two hours; English [1 a], two hours.

First Year, Second Semester:—Mathematics [2 a], four hours; General Chemistry B, four hours; Pharmacognosy B, three hours; French [A], four hours.

Second Year, First Semester:—Analytical Chemistry A, ten hours; Pharmacognosy C, two hours; French [B], two hours; French, German, or other study, two hours.

Second Year, Second Semester:—Analytical Chemistry B, seven hours; Pharmacy A, three hours; Pharmacognosy E, two hours; Mineralogy B, two hours; French or German, two hours.

Third Year, First Semester:—Pharmacy B, ten hours; Organic Chemistry A, and a part of B, six hours.

Third Year, Second Semester:—Organic Chemistry D, five hours; Pharmacy C, four hours; Elective studies, not to exceed seven hours, taken from the following: Physiological Chemistry A, five hours, or C, five hours; Organic Chemistry BB, two hours, or C, five hours; French or German; Physics [2], five hours.

Fourth Year, First Semester:—Pharmacognosy D, three hours; Pharmacology A, three hours, and B, five hours. Elective studies and studies in research.

Fourth Year, Second Semester:—Pharmacognosy E, three hours; Analytical Chemistry F, three hours; Organic Chemistry DD, five hours, or CC, five hours; Research.

III. IN SELECTED STUDIES

Students not expecting to graduate can enter for selected studies at the beginning of the first semester (October 1), at the beginning of the

second semester (February 22, 1897), and, for certain studies, January 5, and March 29, 1897.

For pharmaceutical purposes, the student who is limited to one year will do well to take the regular studies of the first year in the Two-Year Course.

Of the shorter courses usually most available for students having limited time the following may be named:

The Three Months' Course in Qualitative Chemistry beginning in October, January, or March; Pharmacy A and B; Pharmacognosy A and C; General Chemistry A and AA; Organic Chemistry [28] and the two-hour course for beginners; First Steps in Qualitative Analysis.

All the work of the School is open to students not candidates for a degree, so far as they are prepared to engage in it.

REQUIREMENTS FOR GRADUATION.

[Experience in the business of pharmacy is not made a requirement for a degree.]

THE DEGREE OF PHARMACEUTICAL CHEMIST.

The degree of Pharmaceutical Chemist is conferred upon students who have completed the courses of required study enumerated on page 188, and have obtained credit for examinations in these courses in the manner above stated.

THE DEGREE OF BACHELOR OF SCIENCE IN PHARMACY.

To obtain the recommendation of the Faculty for the degree of Bachelor of Science in Pharmacy, the student must secure *one hundred and twenty Hours of Credit*. The prescribed portion of this work is as follows, the figures in brackets denoting Courses given in the Department of Literature, Science, and the Arts:

In English: Courses [1], [1a].

In German: (a) for those who entered *without* German, eight hours, including Course [1] and options in Course [2]; or (b) for those who entered *with* German, four hours, taken from options in Course [2].

In French: (a) for those who entered *without* French, Courses [1], [2], or an equivalent; or (b) for those who enter *with* French, four hours.

In Mathematics: Courses [1a], [2a].

In Physics: Course A [1].

In General Chemistry: (a) for those who entered *without* chemistry, Courses A, B, C; or (b) for those who entered *with* chemistry, Courses B, C.

In Analytical Chemistry: Courses A, B.

In Organic Chemistry: Courses A, C, D.

In Mineralogy: Course B.

In Pharmacognosy: Courses A, B, C, D, E, F.

In Pharmacy: Courses A, B, C.

From the other courses offered in the School, or in other departments of the University, the student must choose, with the approval of the Faculty, and complete enough, including those above prescribed, to make in all *one hundred and twenty* hours of credit.

STEARNS FELLOWSHIP.

The Stearns Fellowship in Research was established in 1895, for a period of two years, by means of a gift made for this purpose by Messrs. Frederick Stearns & Company, of Detroit. The income of the Fellowship is three hundred dollars a year. For 1895-96 and 1896-97 the research will be in organic chemistry and pharmacology. Appointments to the Fellowship are made by the Faculty from graduates of the School who have the qualifications for the work.

LIBRARY, BOOKS OF REFERENCE, AND TEXT-BOOKS.

The School has an extensive library, the main portion of which is shelved with the General Library of the University (see page 20). It contains complete sets of the journals, the original repositories of the sciences related to pharmacy, as well as the current periodicals of the profession, encyclopædias and hand-books of chemistry and pharmacy, and the latest works of value in study. The works of reference in use in the School may be estimated at nearly four thousand volumes.

A working library, in a reading alcove of the chemical building, is provided with several hundred volumes for immediate reference, duplicates of those in the General Library. These works are in constant use by students in connection with their laboratory work, and in preparing for their recitations.

Files of current numbers of the journals of pharmacy of the United States are accessible to all students in the museum of the School (see pages 24 and 25).

The text-books in use in the School include the following: In General Chemistry, Freer; in Qualitative Analysis, Prescott and Johnson; in Pharmacy, the U. S. Pharmacopoeia, and Coblentz; in Botany, Bastin; in Pharmacognosy, Flückiger; in Materia Medica, Sayre; in Organic Chemistry, Bernthsen; in Organic Analysis, Prescott.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.

Diploma Fee.—For all alike, *ten dollars*.

Laboratory Expenses.—These vary with the prudence and economy of the student, the average amount being about one dollar and twenty cents a week.

For additional information in regard to expenses see page 35.

*The Matriculation Fee and the Annual Fee must be paid in advance. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Homœopathic Medical College.

A special Announcement giving further information in regard to this College is published annually. For copies of this Announcement or for other information relating to the College, address Dr. Roy S. Copeland, Secretary of the Faculty, Ann Arbor, Michigan.

THE Homœopathic Medical College was established as a Department of the University in 1875. In 1895 the college was reorganized by the Board of Regents. Several radical changes were made, and better and more successful work is now done than ever before. In view of the increased facilities for teaching, it is believed that this college offers superior advantages to students who desire thorough instruction in homœopathy.

The college has commodious buildings on the University campus and, a few blocks distant, a new and well-equipped hospital.

The college year extends from the first day of October to the Thursday following the last Wednesday in June, and the full course covers four college years.

REQUIREMENTS FOR ADMISSION.

Every applicant for admission to the Homœopathic Medical College must be at least seventeen years of age, and must present to the Faculty satisfactory evidence of a good moral character.

Women are admitted, as to all other departments of the University, on the same conditions as men.

Matriculates in a regular course in the Department of Literature, Science, and the Arts (page 36), graduates of literary colleges of good standing, graduates of approved diploma schools* and of other high schools of equal standing, are admitted without examination on presentation of proper evidence to the Secretary of the Faculty. For all others the requirements for admission are as follows:

English.—An essay of not less than two pages (foolscap), correct in spelling, punctuation, capital letters, grammar, and paragraphing.

Mathematics.—*Arithmetic.*—Fundamental Rules, Fractions (common and decimal), Denominate Numbers, Percentage, Proportion, Involution and Evolution, and the Metric System of Weights and Measures.

Algebra.—Fundamental Rules, Fractions, Equations of the First Degree containing two or more unknown quantities. *Geometry.*—Plane Geometry.

Physics.—An amount represented by Carhart and Chute's Elements of Physics.

Botany.—The elements of Vegetable Anatomy and Physiology as given in Spalding's Introduction to Botany.

Zoology.—Packard's Zoology, briefer course; or McMurrich's Invertebrate Morphology.

History.—Myers's General History, or an equivalent; and Higginson's or Johnston's History of the United States.

Latin.—Jones's First Latin Book, or Harkness's Latin Reader, or an equivalent amount in any other text-book. An applicant who is not prepared to pass the examination in Latin, may take a condition in this subject, which condition he must remove before entering on the work of the second year.

Examinations for admission will be held Tuesday and Wednesday, September 29 and 30, 1896. Applicants are required to present themselves on one of these days, as they are expected to be in attendance on the first day of the term, when the regular course of instruction begins. To provide for cases in which it is absolutely impossible for the applicant to be present at the time announced, supplementary examinations will be held at such time as may be determined upon by the Faculty; but no excuse, except of an urgent character, will be accepted for failure to appear at the first examination.

Before admission to examination, every applicant is required to present to the Secretary of the Faculty the Treasurer's receipt for the payment of the matriculation fee and the annual fee. It will, therefore, be necessary for him to apply first to the Steward at his office in University Hall, register his name as a student in the Homœopathic Medical Col-

*The diploma schools comprise all those approved by the Faculty of the Department of Literature, Science, and the Arts. For a list of these see page 47.

lege, and pay his fees to the Treasurer. In case of rejection, the money paid preliminary to examination will be refunded.

ADMISSION TO ADVANCED STANDING.

Persons who have studied medicine elsewhere may be admitted to advanced standing upon evidence of proficiency in the studies which have already been pursued by the class to which they seek admission.

Students in the Department of Literature, Science, and the Arts, who desire to study medicine in this college can gain advanced standing by taking, as a part of their work in that department, courses practically identical with some of those prescribed for graduation in medicine. By making proper choice of elective studies, it is possible for a student to earn the two degrees, Bachelor of Science and Doctor of Medicine, in six years (compare pages 103, 152, 153, and 154). Students desiring to take advantage of this opportunity for combining literary and professional work should consult Professor W. B. Hinsdale, Dean of the College.

COURSE OF INSTRUCTION.

Surgery.—A complete course of lectures on minor surgery and bandaging is given to students of the first year.

A complete course of lectures on operative surgery, fractures, and dislocations, and on the principles of surgery, is given to students of the third and fourth years.

Candidates for graduation are required to demonstrate their knowledge of operative surgery by operations on the cadaver, a requisite number being provided by the authorities without expense to the class.

Under the direction of the assistant to the chair of surgery, students are allowed to make the necessary preparations for operations, and to assist, when assistance is required. Advanced students, under the immediate supervision of the surgeon in charge, are also allowed to treat patients that have been operated upon.

Materia Medica and Therapeutics.—Throughout the entire year three lectures are given weekly upon these most important subjects. Each one of the principal remedies is considered separately and comparatively with relation to its physiological action and pathological effects, to morbid anatomy, and to symptomatology. All there is known about these remedies, so far as they are practically applicable to the cure of disease, is taught. The homœopathic pharmacy is taught as a separate course.

The Principles of Medicine.—The principles of medicine are taught in a separate course in which the scientific explanation of disease, and

the principles upon which a system of cure must be constructed, are discussed. Especial attention is given to historic medicine and the various systems that have been in vogue as means of attempted cure. In the medical clinic the idea is never lost sight of that the function of the physician is to cure the sick, and that to accomplish this end, accurate prescribing is of the highest importance.

Theory and Practice.—The instruction in theory and practice is didactic and clinical. The subject is divided into separate courses covering all the ground, both general and special, with which a physician in general practice must be familiar. The aim is to make the student, by applying his knowledge of pathology, a good diagnostician, and, by his knowledge of materia medica, a good prescriber. In the clinics especial attention is given to dietetics and other regimenal means of treatment.

Physical Diagnosis.—Physical diagnosis is taught as a separate branch, with the use of a text-book supplemented by lectures and practical demonstrations. The course occupies one hour a week throughout the entire year.

Obstetrics, Gynecology, and Pædology.—The course of study in these several branches is so arranged that separate lectures are given to the several classes in a graded course. Students of the first year are drilled in the fundamental branches of gynæcology, and are taught the use of instruments, the various methods of making gynæcological examinations, etc. With the third year the student enters upon both didactic and clinical work. In the last year of the course lectures are delivered upon special subjects and the senior students are required to make physical and local examinations in the sub-clinics of this department, thus familiarizing themselves with the various methods of practicing touch, palpation, obstetric auscultation, etc., and utilizing to the best possible advantage the many patients availing themselves of this special department of the clinic.

Ophthalmology, Otology, and Laryngology.—Regular lectures on these important specialties, amply illustrated from the abundance of clinical material at the disposal of the Faculty, are given in the third and fourth years. The eye-and-ear, nose, and throat clinic forms one of the most interesting features of the clinical work, and affords the class every facility for a thorough practical study of all the diseases of these organs, that come under the observation of the physician. Students have cases assigned them for dressing and treatment, from time to time, and thus acquire practical skill and knowledge in diagnosis, and in the use of the various instruments.

Mental Diseases.—A special course of lectures on mental diseases is given by Dr. Oscar R. Long, Superintendent of the Michigan Asylum for Insane Criminals.

INSTRUCTION FOR WOMEN.

The course of instruction for women is in all respects equal to that for men. Practical Anatomy is pursued by the two sexes in separate rooms; but in the lectures, in public clinics, in the laboratories, and in various class exercises, it is found that both sexes may attend with propriety at the same time.

SCHEDULE OF STUDIES.

The following schedule shows the arrangement of studies for the course of four years. Three or more lectures are given each forenoon; the afternoons are devoted to laboratory and clinical work. The subjects taught by the Homœopathic Faculty are marked with a (*).

In all branches of study required for graduation, but not specially provided for in the Homœopathic Faculty, the students receive instruction from the respective professors in the Department of Medicine and Surgery. For further information in regard to this work see pages 149 to 159.

FIRST YEAR.**LECTURES AND RECITATIONS IN FIRST SEMESTER.**

<i>Subjects.</i>	<i>Time Required</i>
*Minor Gynæcology,	1 hour a week.
*Principles of Medicine,	1 hour a week.
*Medical and Physical Diagnosis,	1 hour a week.
*Theory and Practice,	1 hour a week.
*Materia Medica,	2 hours a week.
Osteology,	2 hours a week.
General Anatomy,	2 hours a week.
General Chemistry,	5 hours a week.
Bacteriology,	4 hours a week.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
*Minor Gynæcology,	1 hour a week.
*Principles of Medicine,	1 hour a week.
*Medical and Physical Diagnosis,	1 hour a week.
*Theory and Practice,	1 hour a week.
*Materia Medica,	2 hours a week.
General Anatomy,	2 hours a week.
Physics,	4 hours a week.
Organic Chemistry,	5 hours a week.
Histology,	3 hours a week.

LABORATORY WORK IN FIRST YEAR.*

<i>Subjects.</i>	<i>Time Required.</i>
Anatomy,	Every day for 12 weeks.
Chemistry,	Every day for 12 weeks.
Bacteriology,	Every day for 12 weeks.

SECOND YEAR.

LECTURES AND RECITATIONS IN FIRST SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
Materia Medica,	2 hours a week.
*Minor Gynæcology,	1 hour a week.
*Principles of Medicine,	1 hour a week.
*Theory and Practice,	1 hour a week.
*Surgery,	2 hours a week.
Physiology,	5 hours a week.
Hygiene,	3 hours a week.
Embryology,	2 hours a week.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
*Materia Medica,	2 hours a week.
*Minor Gynæcology,	1 hour a week.
*Principles of Medicine,	1 hour a week.
*Theory and Practice,	1 hour a week.
*Surgery,	2 hours a week.
Physiology,	5 hours a week.
Physiological Chemistry,	3 hours a week.
Hygiene,	2 hours a week.

LABORATORY WORK IN SECOND YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Anatomy,	Every day for 12 weeks.
Physiological Chemistry,	Every day for 12 weeks.
Histology,	Every day for 6 weeks.

THIRD YEAR.

LECTURES AND RECITATIONS IN THIRD YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
*Minor Gynæcology,	1 hour a week.
*Major Gynæcology,	2 hours a week.

* Four to five hours constitute a day's work in the laboratory.

*Obstetrics,	2 hours a week.
*Surgery,	3 hours a week.
*Theory and Practice,	3 hours a week.
*Ophthalmology, Otology, and Laryngology,	3 hours a week.
*Materia Medica,	3 hours a week.
Pathological Histology,	2 hours a week.

LABORATORY WORK IN THIRD YEAR.

<i>Subject.</i>	<i>Time Required.</i>
Practical Pathology,	Every day for 5 weeks.

CLINICAL COURSES IN THIRD YEAR.

<i>Subjects.</i>	<i>Time required.</i>
*General Medicine,	2 hours a week.
*Surgery,	2 hours a week.
*Gynæcology,	2 hours a week.
*Ophthalmology, Otology, and Laryngology,	2 hours a week.

FOURTH YEAR.

LECTURES AND RECITATIONS IN FOURTH YEAR.

<i>Subjects.</i>	<i>Time required.</i>
*Theory and Practice,	4 hours a week.
*Surgery,	4 hours a week.
*Obstetrics and Gynæcology,	4 hours a week.
*Materia Medica and Therapeutics,	4 hours a week.
*Ophthalmology, Otology, and Laryngology,	3 hours a week.
*Pathology,	2 hours a week.
*Mental and Nervous Diseases,	1 hour a week.
*Pædology.	1 hour a week.

CLINICAL COURSES IN FOURTH YEAR.

<i>Subjects.</i>	<i>Time required.</i>
*General Medicine,	1 afternoon a week.
*Surgery,	2 afternoons a week.
*Gynæcology,	1 afternoon a week.
*Ophthalmology, Otology, and Laryngology,	2 afternoons a week.

EXAMINATIONS.

At the end of each semester, examinations (written, oral, or both written and oral) are held on all subjects taught during the semester, and each student's grade is entered upon the records of the Faculty. Students "*conditioned*" cannot apply for another examination in the

same subject until the close of the next course or semester, except that a student conditioned at the close of the college year may ask for another examination in the first two weeks of the following year. Students reported "*not passed*" are required to take the course over again before applying for another examination.

REQUIREMENTS FOR GRADUATION.

To be admitted to the degree of Doctor of Medicine, a student must be twenty-one years of age and possess a good moral character. He must have completed the required courses in laboratory work, and have passed satisfactory examinations on all the required studies included in the full course of instruction. He must have been engaged in the study of medicine for the period of four years, the last two of which must have been in this college.

FACILITIES FOR INSTRUCTION.

Museums and Laboratories.—The museums of anatomy and *materna medica*, comprising thousands of specimens, models, and charts, afford the best means attainable for the close study of anatomy, physiology, and pathology. The general and special cabinets of the University, containing about 250,000 specimens, are also open freely to all students. (Compare pages 21 to 26.) The facilities for the study of chemistry, afforded by the chemical laboratory, are not excelled in any medical college in this country, and the arrangements for the laboratory work are such that medical students, in classes, and working under the direction of the professors in charge, receive practical instruction in the courses in qualitative chemistry and in the analysis of urine, a knowledge of which has become absolutely indispensable to the successful physician. The histological laboratory, amply supplied with microscopes, sphygmographs, stereopticon, etc., offers rare facilities for the prosecution of practical work in experimental physiology and histology. The hygienic and anatomical laboratories are models of beauty and convenience, affording facilities for instruction in hygiene and in practical anatomy, unsurpassed, if equalled, by those of any other institution of learning in the United States. For a more full description of the laboratories of the University used by homœopathic students in common with students of other departments, see pages 25 to 30, and 150 to 153.

Libraries.—The General Library of the University (see page 20) is open to the free use of students. Important additions have recently been made to the collection of works on homœopathy. There is also a free

reading room in the Homœopathic Building, where all the homœopathic publications of note are kept on file.

Other Facilities.—Students in the Homœopathic College have the privilege of attending the scientific and philosophical lectures, collateral to medicine, given in the Department of Literature, Science, and the Arts. For a description of the Waterman Gymnasium, and the conditions on which it is open to students, see page 31.

THE UNIVERSITY HOSPITAL, HOMŒOPATHIC.

The University Hospital, Homœopathic, is in charge of a competent resident medical officer and an experienced matron, and is provided with a corps of trained nurses; it contains large, airy, and well-lighted wards for male and female patients, private rooms for special patients, rooms for antiseptic surgery and for lying-in cases, dispensary, etc., all under the immediate direction of the Faculty, the members of which attend upon the sick in the hospital, and draw from them the material for clinical instruction.

The surgical, medical, gynæcological, and ophthalmological clinics are held daily in the spacious clinical amphitheatre, at which times examinations of patients are made by the professors in charge, or by students under the directions of professors, prescriptions given, and surgical operations performed in the presence of the class. The several clinics are held on separate days, of which the profession throughout the State will be notified.

In addition to special rooms with all modern apparatus and appliances for antiseptic surgery, there is a lying-in ward. Each senior student is required to attend cases of labor and become familiar with the duties of the lying-in room, under the immediate direction of a member of the Faculty.

The hospital is furnished with all modern electrical appliances, and, where indicated, skilled attendants apply electrical treatment. The junior and senior students receive special instruction in this line.

Much attention is paid to physical diagnosis, and the abundance of clinical material furnishes many interesting cases. Students are required to take the history of patients and, under proper supervision, make personal examination and prescriptions. It is the aim of the Faculty to make clinical instruction systematic and thorough.

The hospital is kept open for patients during the college year, but no contagious diseases are admitted. Under the present organization, patients are much better accommodated, and clinical instruction is rendered more systematic and efficient than was formerly possible. The

expenses to patients are only for their board, for unusual appliances or special nursing, and for medicines, the services of the Faculty being rendered gratuitously to those made available for clinical instruction.

Patients who desire to enter the hospital are requested to write to the medical superintendent to ascertain if there is room for their accommodation, and to obtain a circular giving more fully the rules governing admission.

Training School for Nurses.—In connection with the Hospital there is a training school for nurses under the charge of a competent and experienced principal. The term of study and service extends through two years, at the expiration of which time those who have proved trustworthy are granted certificates of graduation. For further information in regard to this school application may be made to the Medical Superintendent of the University Hospital, Homœopathic.

TEXT-BOOKS AND BOOKS OF REFERENCE.

A list of text-books and books of reference recommended is given in the special Announcement of the College. The student who begins a course of reading without an instructor is recommended to devote the most of his time for the first year to the elementary branches, anatomy, physiology, and general medical chemistry.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.

Diploma Fee.—For all alike, *ten dollars*.

Laboratory Expenses.—In the laboratories, the students pay for the material used, and the expenses vary somewhat with the care and economy practiced. The required laboratory courses cost approximately as follows:—

Anatomy,	\$20.00
Chemistry,	15.00
Bacteriology,	15.00

*The Matriculation Fee and the Annual Fee must be paid in advance, and no student can select his seat until after such payment. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Physiological Chemistry,	15.00
Histology,	5.00
Pathological Histology,	10.00

The total amount of fees paid to the University during the whole four year's course, for matriculation, incidental expenses, materials used, and diploma, is, for Michigan students, about \$240.00, and for others, about \$295.00, varying a little with the student's actual laboratory expenses.

For additional information in regard to expenses see page 35.

Students arriving in Ann Arbor, and desiring further information, should apply at the office of the Faculty, in the Homœopathic College, North University Avenue. The office will be open daily during the last week in September, and members of the Faculty, or some one who can give information, will be in attendance.

College of Dental Surgery.

A special Announcement giving further information in regard to this College is published annually. For copies of this Announcement, or for other information relating to the College, address Dr. J. Taft, Dean of the College, Ann Arbor, Michigan.

The College of Dental Surgery was established as a Department of the University in 1875. The college year extends from the first day of October to the Thursday following the last Wednesday in June. The lectures close about June 15, in order to allow time for the final examinations before Commencement.

REQUIREMENTS FOR ADMISSION.

Applicants for admission must be at least eighteen years of age, and must present to the Faculty satisfactory evidence of good moral character. This should be in the form of a letter from a reputable dental or medical practitioner in the place from which the applicant comes.

Matriculates in the other scientific departments of the University, and graduates of recognized colleges, academies, or high schools, are admitted without further examination on presentation of proper diploma or certificate. Commercial and English diplomas are accepted only so far as they include the studies indicated in the scheme for examination as printed below. Applicants are requested to bring or send to the Secretary of the Faculty a letter from the superintendent of the school from which the diploma was obtained, naming the subjects studied and the credit given for each study.

All other applicants are examined as to their previous education and their fitness to enter on the technical study of dentistry. The subjects on which examinations are held are as follows:

English.—An essay of not less than one page (foolscap), correct in spelling, punctuation, capital letters, grammar, sentential structure, and paragraphing.

History.—Myers's General History, or an equivalent, and Higginson's or Johnston's History of the United States.

Mathematics.—*Arithmetic.*—Fundamental Rules, Fractions (common and decimal), Denominate Numbers, Percentage, Proportion, Involution and Evolution; and the Metric System of Weights and Measures. *Algebra.*—Fundamental Rules, Fractions, Equations of the First Degree, containing two or more unknown quantities. *Geometry.*—Plane Geometry.

Physics.—An amount represented by Avery's Natural Philosophy or Carhart and Chute's Elements of Physics.

Latin.—Jones's First Latin Book, or Harkness's Latin Reader, or an equivalent amount in any other text-book.

Botany, Zoology, Physical Geography, and Physiology.—The applicant must offer *two* of these subjects. The requirements in each subject are as follows:

Botany.—The elements of Vegetable Morphology and Physiology as given in Spalding's Introduction to Botany.

Zoology.—Packard's Zoology, briefer course.

Physical Geography.—Tarr's Elementary Physical Geography, especially chapters 9 to 21 inclusive, or an equivalent.

Physiology.—Martin's The Human Body.

Entrance examinations are held in Ann Arbor at 10 A. M., the last Wednesday in June, and at 10 A. M., September 30th. Applicants are expected to be present at one of these dates, but to provide for cases in which it is impossible for the applicant to be present, other examinations are held at such times as may be determined by the Faculty.

Before admission to the examination, every student is required to present to the Dean of the Faculty the Treasurer's receipt for the payment of the matriculation fee and the annual fee. It will therefore be necessary for the candidate to apply first to the Steward at his office in University Hall, register his name as a student in the College of Dental Surgery, and pay his fees to the Treasurer. In case of rejection, the money paid preliminary to examination will be refunded.

Admission examinations are also held at times designated by the examiners between June 1 and September 15 of each year, at the places and by the persons named below:

Dr. Wm. Mitchell, No. 39 Upper Brook St., London W., England.

Dr. Victor H. Jackson, 240 Lenox Ave., New York, N. Y.

Dr. Alfred W. Hoyt, 243 Wabash Ave., Chicago, Ill.

Dr. Immer C. St. John, Minneapolis, Minn.

Dr. W. J. Younger, San Francisco, Cal.

Dr. J. Taft, corner of Elm St. and Shillito Ave., Cincinnati, O.

These examinations are conducted in writing, and the papers written by the applicants are sent to Ann Arbor to be passed upon by the Faculty of the College.

In order to receive credit for a full course, students must enter within ten days after the opening of the college year. It is very important that first-year students be present promptly at the opening of the year.

ADMISSION TO ADVANCED STANDING.

Persons having qualifications for admission to this college, and having studied dentistry in other recognized schools for at least one year, may be admitted to advanced standing after having passed a satisfactory examination on all the studies which have already been pursued by the class to which they seek admission.

Graduates of the Department of Medicine and Surgery (page 147) or other medical colleges of equal rank, are allowed credit toward graduation for so much of the required course in dentistry as was included in their medical course.

ASSIGNMENT OF SEATS.

Students are allowed to select seats in the lecture room and places in the dental laboratory in the order in which they matriculate; and each student is expected to occupy the seat so selected during the session.

COURSE OF INSTRUCTION.

In the arrangement of the course of study it is the aim to make it such as will meet the requirements of the student and the expectations of the profession, and will secure the greatest benefit to the public. To accomplish these objects, and to accommodate and benefit those students who desire a thorough dental education, the course of instruction is made to cover three college years of nine months each. The course thus affords time for the teaching and study of subjects not generally taught; and especially does it give time for thorough work in the laboratories. Though not fully covering the defects of preliminary education, this course, supplemented by repeated examinations and written exercises, remedies some deficiencies of earlier training and is of itself an efficient means of mental discipline, and of professional and scientific culture.

In the arrangement of the work a graded course of study is combined *with repetition of such lectures only as will avoid the confusion incident*

to the presentation of too many parts of the general subject to the mind of the student at an early period of his studies, and also obviate the objection of dismissing one part of a subject before its relations to other parts can be seen and appreciated.

*SCHEDULE OF STUDIES.****FIRST YEAR.****FIRST SEMESTER.**

<i>Subjects.</i>	<i>Hours.</i>
Osteology and Anatomy,	51
General Chemistry,	85
Prosthetic Dentistry,	17
Dental Laboratory Work,	400

SECOND SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Organic Chemistry,	51
Descriptive Anatomy,	51
Histology (lectures),	51
Prosthetic Dentistry,	17
Dental Laboratory Work,	400

SECOND YEAR.**FIRST SEMESTER.**

<i>Subjects.</i>	<i>Hours.</i>
Dental and Comparative Anatomy,	34
Physiology,	85
Bacteriology,	68
Operative Principles and Materials,	17
Prosthetic Dentistry,	17

SECOND SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Physiology,	85
Operative Principles and Materials,	17
Prosthetic Dentistry,	17

The following subjects are also included in the work of the second year, making a continuous course of laboratory instruction running through the year.

<i>Subjects.</i>	<i>Hours.</i>
Regulating Technique,	80
Dissection,	120
Histological Laboratory Work,	80
Qualitative Chemistry,	120
Operative Technique,	120

*The column of hours gives the total number of hours of work required for each semester.

THIRD YEAR.**FIRST SEMESTER.**

<i>Subjects.</i>	<i>Hours.</i>
Dental Surgery and Pathology,	51
Oral Surgery,	34
Dental Medicine,	51
Orthodontia and Oral Deformities,	17
Prosthetic Clinic,	170
Operative Dentistry,	17
Operative Clinic,	250

SECOND SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Dental Surgery and Pathology,	51
Oral Surgery,	34
Dental Medicine,	51
Orthodontia and Oral Deformities,	17
Prosthetic Clinic,	170
Operative Dentistry,	17
Operative Clinic,	250

Opportunity is given during the third year for optional studies.

DESCRIPTION OF COURSES.

Anatomy is studied didactically and practically. A full course on general osteology is taken with the medical classes in the Department of Medicine and Surgery (page 147). Special instruction is also given to students of dentistry in the anatomy and histology of all that pertains to the oral apparatus, embracing also particular attention to *comparative* dental anatomy.

In the histological laboratory the student not only acquires a knowledge of the principal structures and tissues of the animal body, but also becomes familiar with the workings and uses of the microscope.

In chemistry, students are required to attend lectures on general chemistry, and also to take a course in analytical chemistry with special reference to those agents or secretions that concern their future needs. A course in the analysis of saliva is optional.

In dental materia medica a special course of lectures embraces the history, pharmacy, pharmacology, and therapeutics of all drugs and remedies used in the treatment of diseases occurring in dental practice, and includes a discussion of pain obtundents, local and general anæsthetics, and prophylactic remedies.

In dental pathology and surgery a course of lectures embraces a discussion of the various diseases which affect the teeth and mouth, and *their etiology* and treatment. Special attention is given to diseases which

pertain peculiarly to the practice of dentistry. Illustrative cases are shown and operated on in the presence of the class. All instruments, appliances, and methods that are of interest or value in this connection are exhibited and discussed.

A course of lectures on clinical oral surgery embraces a consideration of diseases of the mouth and associated parts that are of special interest to the dentist, but which lie more within the province of the medical surgeon for treatment. Illustrative cases are exhibited and discussed, and operations performed before the class.

In operative dentistry the instruction is both didactic and practical. In the didactic course a full presentation of approved methods, appliances, and materials used in filling teeth is given, together with the principles which form the basis of practice. This instruction is supplemented by practical instruction in the clinical operating room, which is under the personal supervision of the professor of operative and clinical dentistry and his assistants. Here each student is required to spend fifteen hours a week at the chair, operating for patients, and in this way confirming the principles taught and obtaining such manipulative training as will result in desirable preparation for skilful practice.

In prosthetic dentistry the instruction is both didactic and practical. In the lectures the principles involved in the construction and application of artificial dentures, crowns and bridges, regulating devices, and continuous gum and cleft palate work are fully discussed, and such methods as have proved valuable and worthy are advocated. In the practical department each student in the second year has opportunity and is required to construct and adapt to the mouth practical dentures for the restoration of lost dental organs.

The instruction in dental mechanism embraces experimental construction of the various artificial dentures used to restore lost dental organs. Twenty-five hours a week in the first year are devoted to this work. It consists of taking impressions, making plaster models from impressions, making dies, swedging plates, grinding and adjusting teeth, soldering and finishing, vulcanizing and finishing plates, pouring and finishing cast metal, celluloid, and continuous gum plates, with such instruction as will familiarize the student with the most approved methods for constructing artificial substitutes. The junior class devotes eighty hours to regulating technique; and one hundred and twenty hours to operative technique, in which sections of teeth are made and studied, and cavities are formed in teeth outside of the mouth and filled with cement, gutta-percha, tin-amalgam, and gold.

EXAMINATIONS.

All students of the first and second years are obliged to pass examinations on all the required branches of their respective courses before leaving

ing the college at the end of the year. These examinations are held at the close of each semester, and no student who has failed to pass two of the required branches in his course, is admitted to an advanced class during the first semester of the following year. No standing is given or certificate issued to any one who has failed to pass any of these examinations. Certificates of time are given for the actual period of attendance only.

REQUIREMENTS FOR GRADUATION.

To be admitted to the degree of Doctor of Dental Surgery, the candidate must be twenty-one years of age, must possess a good moral character, must have devoted three years to the study of dentistry, and have passed all the examinations required in his course. Unless admitted to advanced standing, he must have attended three full years in this college. It is recommended that he attend these consecutively.

Every candidate is required to write from time to time upon the various branches of his course, and may at the discretion of the Faculty be required to prepare a thesis upon some assigned topic; he must present for inspection practical operations performed by himself in this college, and give satisfactory evidence of his skill and ability as a practitioner.

GRADUATE COURSE.

The purpose of the graduate course is to meet the requests of a continually increasing number of students for further opportunity to pursue the scientific branches of the regular college curriculum, and also to meet an often expressed wish on the part of practitioners to pursue some special scientific investigation, which has been entered upon at home, with limited resources in the way of books of reference, laboratory facilities, and apparatus, and without the aid of instructors or advisers in associated sciences.

The graduate course is open only to graduates of this college, who have made marked records in their undergraduate work, and to graduates of this and of other colleges who have had at least two years of continuous practice since graduation, and who have published original articles of scientific value showing a capacity on their part for continuing such work with credit.

The course of study is independent of, and additional to, the regular undergraduate work, and embraces only such topics as will aid in *training men to carry on scientific researches in subjects associated with prac-*

tical dentistry, or with dentistry in its scientific aspect. As at present arranged, the work in the first semester deals principally with *materia medica*; and in the second with pathology, according to the following schedule:

FIRST SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Laboratory work in Chemistry (general and organic),	100
Laboratory work in Physiology, or <i>Materia Medica</i> ,	70
Original research on some dental remedy,	200

SECOND SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Laboratory work in Histology,	70
Laboratory work in Bacteriology,	120
Original research on some dental disease,	200

In addition to the foregoing, each student must take at least one of the following elective subjects:—general pathology, electrotherapeutics, quantitative chemical analysis, physiological chemistry, pharmacognosy, salivary analysis, general biology, dental metallurgy, or must prepare a thesis on the original research of either the first or the second semester.

The time required to complete the course prescribed for the advanced degree depends upon the diligence and capacity of the student, but at least a year's work is required in all cases.

Graduate students are required to pay the same annual fee as undergraduates, and those who have not previously been matriculated in this University are also required to pay the usual matriculation fee. The expenses of the laboratory courses vary according to the character of the work taken.

The degree of Doctor of Dental Science (D. D. Sc.) is conferred upon graduate students who complete the prescribed course as outlined above.

FACILITIES FOR INSTRUCTION.

For general information relating to the University libraries, museums, laboratories, hospitals, and gymnasium, see pages 20 to 32.

Among the facilities of special interest to students of dentistry the following may be mentioned.

DENTAL MUSEUM.

The dental museum is supplied with a large number of anatomical, physiological, pathological, and histological preparations, including a series illustrating dentition from infancy to the completion of the process in the adult, and the normal changes through life to old age, and also

illustrative of the dental and osseous tissues. Preparations, natural and artificial, greatly facilitate the study of the nervous and vascular systems. The design is to make every practicable appliance in this direction available.

The late Professor Ford contributed his entire collection of crania and odontological specimens to this museum, making it one of the best of its kind in this country.

DENTAL LIBRARY.

A library of dental science, containing almost every known work on this specialty, including an almost complete file of every dental journal published, is shelved in the dental building, where it is accessible to all students. A finely appointed reading room is connected with the library.

LABORATORY OF MECHANICAL DENTISTRY.

This laboratory contains charcoal and coke furnaces, soldering table, rolling mill, and lathes; appliances for the various manipulations of prosthetic dentistry, such as the construction of artificial dentures in gold, continuous gum, silver, aluminum, and other bases; appliances for the regulation of teeth and for the mechanical treatment of oral deformities; and facilities for the manufacture of instruments. The laboratory has accommodations for two hundred students at a time. Particular attention is given to the manipulation and management of the precious metals with reference to their use for dental purposes.

Each student is furnished a bench containing a drawer and cupboard with lock and key, to contain the instruments that he is obliged to furnish for the prosecution of his work. If a student has any of these instruments it would be well to bring them; but it is more desirable to defer purchasing until the advice of the instructor in the college has been secured, as it is desirable that a complete and uniform outfit should be in the possession of each student. This outfit costs about fifty dollars, and if taken care of will be a permanent investment, as the tools will all be necessary and useful in practice. These tools must be purchased at the beginning of the course, as they are required during the first as well as the succeeding years.

DENTAL OPERATING ROOMS.

The operating rooms are large, well-lighted, heated, and ventilated. The main room contains sixty operating chairs, with an extension bracket and movable table with drawers for instruments for each chair. Other rooms contain chairs and apparatus for the administration of anæsthetics, for the extraction of teeth, and for other purposes. Each student is required to supply himself with a dental engine and a full set of *operating instruments*; these must be purchased with the advice of the instruc-

tor, and will cost about one hundred dollars. Like the laboratory tools, they will be necessary to begin practice, and if carefully used will last many years; consequently care should be exercised in their purchase. They need not be purchased until the third year.

COURSES IN OTHER DEPARTMENTS.

Those who can command the time may also avail themselves of numerous lectures, or pursue elective studies, in the Department of Literature, Science, and the Arts (page 36); or may attend special lectures in the Department of Medicine and Surgery (page 147), such as those on gynæcology and the diseases of children, or on other subjects that are important to the practicing dentist.

TEXT-BOOKS AND BOOKS OF REFERENCE.

First Year.—ANATOMY.—Gray; Morris.

CHEMISTRY.—Freer; Remsen.

ORGANIC CHEMISTRY.—Remsen.

HISTOLOGY.—Piersol; Schäfer; Klein.

MEDICAL DICTIONARY.—Gould; Thomas.

PROSTHETIC DENTISTRY.—Richardson.

CROWN AND BRIDGE WORK.—Evans.

Second Year.—PHYSIOLOGY.—Foster; Martin.

BACTERIOLOGY.—Fränkel; Sternberg; Vaughan and Novy.

QUALITATIVE CHEMISTRY.—Prescott.

METALLURGY.—Essig.

DENTAL ANATOMY.—Black; Tomes.

Third Year.—GENERAL PATHOLOGY.—Ziegler; Green.

DENTAL PATHOLOGY.—Wedl; Ingersol.

ORAL SURGERY.—Garretson; Tomes.

OPERATIVE DENTISTRY.—Harris; Taft.

ORTHODONTIA.—Talbot; Guilford.

DENTAL MEDICINE.—Wood; Gorgas; Potter.

REFERENCE BOOKS.—American System of Dentistry; Watts's Chemical Essays; Farrar's Irregularities of the Teeth; Mitchell's Chemistry; Cassidy's Dental Chemistry and Materia Medica; Kingsley's Oral Deformities.

FEEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

* The Matriculation Fee and the Annual Fee must be paid in advance, and no seat will be assigned to a student until after such payment. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.

Diploma Fee.—For all alike, *ten dollars*.

Laboratory Expenses.—*Chemical Laboratory.*—Students are required to pay for the materials and apparatus consumed by them. The average expense for the required course is about *ten dollars*. *Histological Laboratory.*—A charge of *three dollars* is made for material used in this laboratory. *Anatomical Laboratory.*—A charge of *ten dollars* is made for material used in dissecting. *Laboratory of Mechanical Dentistry.*—A fee of *three dollars* is charged to cover the cost of gas, plaster of Paris, wear and tear of laboratory supplies, etc. The expenses for tools for each student are about *fifty dollars*. The expenses for incidentals, teeth, etc., are about *fifteen dollars*.

The average total expenses of a student of dentistry, including University fees, are from two hundred and seventy to three hundred and seventy dollars for the college year. For additional information in regard to expenses see page 35.

Summer School in the Department of Literature, Science, and the Arts.*

A special Announcement of the Summer School, containing further particulars than are here given in regard to the courses of instruction, etc., is published annually. Copies of this Announcement can be had by addressing Mr. James H. Wade, Steward of the University.

The Summer School is under the general supervision of the Faculty of the Department of Literature, Science, and the Arts; though the details of management are in the hands of a sub-Faculty. The following persons constitute the Executive Committee for the year 1896:

ELMER A. LYMAN, Instructor in Mathematics (*Chairman*).

ERNST H. MENSEL, Instructor in German (*Secretary*).

JOHN O. REED, Assistant Professor of Physics.

GEORGE O. HIGLEY, Instructor in General Chemistry.

EARLE W. DOW, Instructor in History.

The School opens on the first Monday after Commencement and continues for six weeks (June 29—August 7, 1896).

GENERAL REGULATIONS.

1. Before beginning work in the school, students are required to register with the chairman of the executive committee at the office of the Dean of the Department of Literature, Science, and the Arts, and to pay

* For the Summer School of Law see page 176.

their fees to the Treasurer of the University. Laboratory fees, where required, are also to be paid to the Treasurer.

2. Each full course of study, except when otherwise specified, comprises thirty lessons, one hour each day for five days in the week.

3. The charges for tuition for the session are as follows:

One Course,	\$15.00
Two Courses taken by the same student,	25.00
Three Courses taken by the same student,	30.00

The maximum tuition fee is \$30.00. For laboratory courses the expense varies with the character of the work done and the economy of the student.

4. Credit towards graduation in the Department of Literature, Science, and the Arts, may be given to students regularly enrolled in the Summer School, subject to the following rules and conditions:

(a) No credit is given save for work that is similar in kind to courses that are regularly offered in that Department.

(b) Credit is given only for full courses of five hours a week for the session, or multiples thereof. Exceptions to this rule may be made in the case of laboratory courses.

(c) The credit to be given for a full course of five hours a week is *two hours*,* and for multiple courses in proportion. In some courses credit of *three hours* or *five hours* may be given for proportional time and work.

(d) No student can receive more than *six hours* of credit for work done in any one session of the Summer School, nor more than *twelve hours* in all for work done in the school.

(e) All credits must be reported by the several instructors to the Secretary of the Summer School immediately on the close of the annual session.

COURSES OF INSTRUCTION.

The courses of instruction are arranged to meet the wants of several classes of students. It is supposed that a considerable proportion of the students in attendance will be teachers in high schools or academies who desire to enlarge their preparation for their special work. Students who wish to review studies preparatory to presenting themselves for examination for admission to college or university will find courses directly adapted to meet their wants. Students regularly matriculated in the University will also find courses suited to their needs.

*For explanation of the term Hour of Credit see page 57

In the descriptions of courses given below, the terms *two hours, four hours, six hours*, etc., indicate the amount of credit to be given for the course. Where no mention of hours is made it is to be understood that the course is not entitled to credit.

The courses offered for the summer of 1896, with the names of the instructors, are as follows.

GREEK.

MR. MEADER.

1. Preparatory Greek.
2. Greek Drama. Euripides, Medea; Aristophanes, Clouds. *Two hours.*

LATIN.

1. Preparatory Latin:
 - (a) Latin Prose. Mr. REICHLE.
 - (b) Lives of Nepos. Assistant Professor DRAKE.
 - (c) Cicero's Orations against Catiline. Mr. REICHLE.
 - (d) Virgil's Aeneid. Mr. REICHLE.
2. Rapid Reading of Selections from Nepos, Phædrus, and Martial. *Two hours.* Assistant Professor DRAKE.
3. Roman Satire. Selections from Juvenal and Persius. *Two hours.* Assistant Professor DRAKE.
4. Historical Proseminary. *Two hours.* Assistant Professor DRAKE.

FRENCH.

MR. LEVI.

1. Beginners' Course. Grammar and reading.
 2. Classic Dramas: Corneille, Racine, Molière. *Two hours.*
- Courses in composition and modern reading will be given if demanded

GERMAN.

MR. MENSEL AND DR. VOSS.

1. Beginners' Course. Grammar and reading of easy narrative prose.
2. Modern Prose and a Classic Masterpiece. *Two hours.*
3. Scientific German. *Two hours.*
4. Composition. Systematic course in syntax with daily exercises in writing German. *Two hours.*
5. Classic Drama. Representative dramas of Lessing, Goethe, or Schiller, with lectures on the history of German literature of the period. *Two hours.*
6. History of the German Language. Text-book: Weise's *Unsere Muttersprache*. *Two hours.*

ENGLISH AND RHETORIC.

1. English Literature (including Shakespeare). *Two hours.* Professor DEMMON.
2. American Literature. *Two hours.* Professor DEMMON.
3. Anglo-Saxon. *Two hours.* Professor HEMPL.
4. Historical English Grammar. *Two hours.* Professor HEMPL.
5. Chaucer. *Two hours.* Professor HEMPL.
6. English Composition. *Two hours.* Assistant Professor SCOTT.
7. Analysis of English Prose. *Two hours.* Assistant Professor SCOTT.

ELOCUTION AND ORATORY.

PROFESSOR TRUEBLOOD.

1. Exercises in vocal culture, breathing, and position. *Two hours.*
2. Elocution. Exercises in vocal culture continued, delivery of short extracts from masterpieces of the orators. *Two hours.*
3. Shakespearean Reading. *Two hours.*

MUSIC.

PROFESSOR STANLEY.

1. Methods of public school work in music.
2. Harmony. Twice a week.
3. History of Music. Three times a week.

The foregoing courses will be withdrawn unless taken by at least ten students. Professor STANLEY will also give private lessons on the pipe organ.

HISTORY.

MR. DOW.

1. General History, with special reference to mediæval history. *Two hours.*
2. American History and Institutions.

PHILOSOPHY.

MR. REBEC.

1. Formal Logic. Text-book: Minto's Logic. *Two hours.*
2. General Psychology. Text-book: James's Psychology. *Two hours.*
3. Plato's Republic. Davies and Vaughan's Translation. *Two hours.*

THE SCIENCE AND THE ART OF TEACHING.

1. Moral Education. The theory of moral education; school organization as related to such education; the moral values of the studies of the school; a special study of history and literature as the great instruments of moral teaching. *Two hours.* Professor HINSDALE.

2. Child Study. The former meaning of child study; the present meaning of the term; methods of study. *Two hours.* Superintendent A. S. WHITNEY of the East Saginaw Public Schools.

POLITICAL ECONOMY.

1. Teachers' Course. Lectures. *Two hours.* Professors ADAMS and F. M. TAYLOR.
2. Elements of Political Economy. Text-book and lectures. *Two hours.* Professor F. M. TAYLOR.
3. Money and Banking. Text-book and lectures. *Two hours.* Professor F. M. TAYLOR.

MATHEMATICS.

1. Geometry for Admission. Text-book: Beman and Smith's Plane and Solid Geometry. Mr. LYMAN.
2. Algebra for Admission. Text-book: Smith's Elementary Algebra, revised by Stringham. Mr. HALL.
3. Trigonometry and Algebra. Equivalent to course 1a of the first semester's work (page 83). *Three hours.* Mr. LYMAN.
4. Analytic Geometry. This course together with the algebra of Course 3 above is equivalent to Course 1 of the first semester's work, and *four hours* credit will be given for the two courses taken together. Mr. HALL.
5. Theory of Equations. Text-book: Burnside and Panton's Theory of Equations. Mr. HALL.
6. Elementary Mechanics. Text-book: Ziwet's Theoretical Mechanics, Parts I and II. Dr. GLOVER.
7. Projective Geometry. Lectures on the synthetic geometry of the range, point, and conic section. *Two hours.* Dr. GLOVER.
8. Theory of Functions. Lectures on the elements of the theory of functions. *Two hours.* Dr. GLOVER.
9. Theoretical Mechanics. An advanced course. Text-book: Ziwet's Theoretical Mechanics, Part III. *Two hours.* Assistant Professor ZIWET.
10. Geometry. Teachers' course. Text-book: Beman and Smith's Plane and Solid Geometry. Professor BEMAN.
11. Calculus. Text-book: Osborn's Differential and Integral Calculus. Professor BEMAN.
12. Differential Equations. Text-book: Johnson's Differential Equations. *Two hours.* Professor BEMAN.

PHYSICS.

1. Teachers' Course in General Physics. Lectures and recitations. Text-book: Carhart and Chute's Physics. Assistant Professor REED.

2. Laboratory work for Beginners. Elementary experiments and discussion of methods. *Two hours.* Assistant Professor PATTERSON.
3. Primary and Secondary Batteries. Laboratory work and recitations. *Two hours.* Assistant Professor PATTERSON.

CHEMISTRY.

Students will be accorded the full privileges of the laboratory each day from 8-12 A. M. and 2-5 P. M. The laboratory expenses vary from \$1.00 to \$1.75 a week, proportionately to the time spent, the course chosen, and the economy used.

1. General Inorganic Chemistry. Lectures and recitations. *Three hours.* Mr. HIGLEY.
2. Laboratory Work in General Inorganic Chemistry. *Three, four, five, or six hours,* as arranged with instructor. Mr. LICHTY. Course 2 must be accompanied by Course 1 or preceded by its equivalent.
3. Qualitative Analysis. Laboratory work and recitations. *Four, five, or six hours,* as arranged with instructor. Mr. TROWBRIDGE.
4. Beginning Quantitative Analysis. Lectures and recitations. *Four or six hours,* as arranged with instructor. Professor E. D. CAMPBELL.
5. Inorganic Preparations. Laboratory work. *Three, four, five, or six hours,* as arranged with instructor. Mr. LICHTY.
6. Organic Chemistry. Lectures and recitations. *Two hours.* Mr. TROWBRIDGE.
7. Organic Preparations. *Two to six hours.* Mr. TROWBRIDGE.
8. Methods of Determining Molecular Weights. *Two or three hours.* Mr. HIGLEY.
9. Advanced Quantitative Analysis. *Four or six hours.* Professor E. D. CAMPBELL.
10. Organic Analysis. Laboratory work and reference reading. Credit arranged with instructor. Mr. TROWBRIDGE.
11. Laboratory Research in General Chemistry. Hours and credit arranged with instructors. Mr. HIGLEY and Mr. LICHTY.

ASTRONOMY.

MR. GILLIS.

1. General Astronomy, with use of equatorial telescope. *Two hours.*
2. Practical Astronomy, with use of portable transit and sextant. *Three hours.*

ANIMAL BIOLOGY.

MR. LANDER.

1. A study of typical species of animals, with reference to structure, function, development, and relationship. Laboratory work, lectures, and recitations. *Three hours.*
- Course 1 is similar in character to Course 1 in general biology (see page 95), with such modifications as circumstances may require. By communicating with the instructor arrangements for advanced work can be made by persons who have had the equivalent of the course offered.

BOTANY.

MR. POLLOCK.

1. General Biology and Morphology of Plants. *Three hours.*
2. Vegetable Histology. *Two, four, or six hours.*

PHYSIOLOGY.

MR. CROZIER.

1. Laboratory Course. *Two hours.*

CIVIL ENGINEERING.

MR. WRENTMORE AND MR. GOULDING.

1. Mechanical Drawing. *Two hours.*
2. Freehand, Perspective, and Pen and Ink Drawing. *Three hours.*
3. Descriptive Geometry. *Three hours.*
4. Shades, Shadows, and Perspective. *Three hours.*
5. Lettering and Machine Sketching. *Three hours.*
6. Elements of Mechanism. *Two or three hours.*
7. Graphical Analysis of Structures. *Two hours.*

MECHANICAL ENGINEERING.

SUPERINTENDENT C. G. TAYLOR.

1. Mechanical Drawing and Machine Design. *Two hours.*

List of Graduates of 1895.*

DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

BACHELOR OF LETTERS.

†Elliott Talbot Austin,	John Edward Lautner,
Robert Oliver Austin,	Erasmus Christopher Lindley,
Frank Ambrose Beach,	Jacob Lingard Lorie,
Norman Trenholme Bourland,	Alice Elizabeth Lynch,
Iris Carr,	Emma Gennette McAllaster,
Charles Henry Conrad,	Cascen Rich Montague,
Winifred Rose Craine,	Albert Charles Muma,
Herbert Allan Dancer,	James Orin Murfin,
Peter William Dykema,	Martha Elisabeth Orr,
Mary Eva Foley,	†Marjorie Rebecca Paine,
Charles Woodworth Foster,	George Wilcox Peavy,
Walter Carver Fritze,	Myra McPherson Post,
Eugene Horace Garnett,	Nancy Edith Putdum,
Annie Morris Goshen,	James Calvin Reed,
Charles Henry Gray,	Cora Frances Reilly,
Irma Hadzsits,	Frederic Boyd Richardson,
Edith Achsah Hartshorn,	William Benjamin Rubin,
†Josiah Edwin Hickman,	Samuel Benton Shiley,
Edwin Smith Hinckley,	Alice Emily Wadsworth,
Willard Hunter Hutchings,	Elba Emanuel Watson,
Benjamin Franklin Kastl,	Frederick Hosler Willits,
Wilson Klingler,	Rose Viola Winterburn,
Claude Sheldon Larzelere,	Jennie E. Work.

BACHELOR OF SCIENCE.

(IN BIOLOGY.)

Mary Putnam Blount,	Lettie Lenore Conover,
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*The List of Graduates contains the names of all persons on whom degrees were conferred during the year 1895. A dagger (†) indicates that the degree was conferred at some other time than Commencement.

Miriam Dunbar,	Alfred Berthier Olsen, M. D.,	
Lucy Nash Eames,	Clayton Amos Peters,	
	James Rupert Wolfenden.	7

BACHELOR OF SCIENCE.

(IN CHEMISTRY.)

William Holmes Andrews,	Richard Rider Putnam,	
Philip Daggett Bourland,	†Fred Henry Staudt, <i>as of the Class</i>	
†Hans Mannhardt,	<i>of 1894.</i>	
	William Marion Whitten.	6

BACHELOR OF SCIENCE.

(IN ELECTRICAL ENGINEERING.)

Walter Merville Austin,	Harry Valentine Knight,	
William Gray Billings,	Heman Burr Leonard,	
Abraham Lincoln Burgan,	William Julius Melchers,	
George Alfred Damon,	Albert Andrew Passolt,	
James Henry Dickson, A. B.,	Lester Abbott Stanley,	
Alexander Michael Haubrich,	Wellington Clute Tate,	
Bryson Dexter Horton,	Frank Foster Van Tuyl,	
Milton Byron Huntoon,	Homer Wilson Wyckoff.	16

BACHELOR OF SCIENCE.

(IN MECHANICAL ENGINEERING.)

Wallace Wiley Chickering,	John Francis Nichols,	
Howard Malcom Cox,	Wilbur George Salter,	
R. Prosper Gustin,	William Schaake,	
John Hulst,	Emmet Scott,	
Charles Hosmer Morse, Jr.,	Robert Clark Stevens, A.B.,	
	George Bingham Willcox.	11

BACHELOR OF SCIENCE.

(IN CIVIL ENGINEERING.)

Louis Warner Anderson, B. S.,	John Henry Dye,	
<i>Albion College,</i>	Harvey Gould Gilkerson,	
August Blaess,	Clarence Thomas Johnston,	
Platt Richard Bush,	Horace Williams King,	
William Richard Caldwell,	David LeFavour,	
James Horace Dunbar,	Richard Roswell Lyman,	

Thomas Knight Mathewson,	Frederick Gardiner Skinner,	
†Charles Augustine Miner,	Isaac Farber Stern,	
Marian Sara Parker,	Edward Marsh St. John,	
Clarence Herbert Perry,	Nelson John Tubbs,	
Seth Erastus Roberts,	Vance Patterson Wilkins.	21

BACHELOR OF SCIENCE.

(IN GENERAL SCIENCE.)

William Guy Bauer,	Mark Stevens Knapp,	
George Edward Carroll,	Walter Ferguson Lewis,	
Pearl Leone Colby,	Helen Josephine Malarkey,	
Samuel Richard Cook,	†Wilfred Hamilton Manwarren,	
Edward Brind Escott,	Ina McBurney,	
Netta Wilhelmine Haffner,	Charlotte Genevieve Noble,	
Eliza M. Hill,	Jessie Fremont Ruby,	
Frederick Charles Irwin,	Cassius Edward Wakefield,	
Julia Isabelle Kimlin,	Etta Rhoda Wilbur.	18

BACHELOR OF PHILOSOPHY.

Sadie Maria Alley,	Elizabeth C. Hench,
†Abby Louise Barney,	Lina Hesse,
Ira Alanson Beddow,	Bertha Katharine Hine,
Elise Chénault Bennett,	Mildred Hinsdale,
Mary Ella Bennett,	Herman Franklin Hoch,
Joseph Brennemann,	Bessie Lee Hopkins,
Elizabeth Francis Camp,	Minnie Pearl Howell,
Charles Cisco Campbell,	Harriet Eliza Ives,
John Corbin, Jr.,	Lucia Kieve,
Charles Henry Duncan,	Allan Campbell MacDonald,
Annie D. Dunster,	Charles Edward Marshall,
Alva Howard Felger,	Abner Jackson Le Claire Martin,
Thomas Henry Ferguson,	Ph.B., <i>Cornell College</i> ,
Abigail Stuart Gaudern,	Clara May McOmber,
Charles Robert Gillis,	David Franklin Mertz,
Lina Kate Gjems,	Edna Mettler,
Marie Louise Goodman,	William Horace Morley,
Louis Janes Goodyear,	Helen Nelles,
Albert Emerson Greene,	Harry Thomas Nightingale,
Edna Ernest Grimes,	Abigail Pearce,
Louise Mather Harris,	Carlotta Emma Pope,
Frances Elvira Hartley,	Menz Israel Rosenbaum,
Ralph Waldo Emerson Hayes,	Fannie Ellis Sabin,
William Albert Heartt,	Charles Wilber Sencenbaugh,

Lurene Seymour,	Lena Elizabeth Sprague,	
Franklin Bennett Spear, Jr.,	John Walter Verdier,	
Philip Bennett Spear,	Edward Chester Weeks,	
	Stewart Edward White.	54

BACHELOR OF ARTS.

Inez Louise Abbott,	Alfred Hatch Hunt,
Frank DeForest Adams,	Lynn Myrton Johnston,
Rosetta Anderson,	Byron Claudius Kimes,
Anna Bailey,	George King Lawton,
Charles Baird,	Otto Edward Lessing,
Florence Emma Barnard,	Herman Adolf Liebig,
Lester Hayes Beals,	Henry Laurence LeHunte Lyster,
Alice Biester,	James Halsey Mallory, Jr.,
Edmond Block,	Miron Williams Neal,
Arthur Collier Bloomfield,	Marna Ruth Osband,
†Frank Briscoe,	Martha Drake Owen,
John Birt Brooks,	James Willis Parker,
Ella May Bullard,	Phebe Parker,
Caroline Maria Butterfield,	Anthony Pratt,
John Fletcher Byington,	Elizabeth Sorge Rebec,
Addison Clark, Jr., A.B., <i>Add Ran</i>	Ann Loomis Richards,
<i>University,</i>	Effie Lois Roberts,
Mabel Colton,	George Bagg Russel,
Charles Herbert Covell,	May Cecil Ryan,
Henry Shepherd Crane,	Esther Lakin Sanborn,
Francis Potter Daniels,	†Frederick Lyle Searing,
Calvin Olin Davis,	Harry Simons,
Belle Donaldson,	Henry Horace Smith,
Myron LaFayette Downs,	Oliver Lyman Spaulding, Jr.,
†Lena Elizabeth Faulds,	William Albert Spitzley,
Kenneth Chauncey Fitch,	Gertrude Sunderland,
Maude Ethel Fuller,	James Marcus Swift,
Henry Bennett Gammon,	Wade Warren Thayer,
Thomas Edwin Gray,	Herman Pennock Thomas,
George Depue Hadzsits,	Annie Sayre Thompson,
James Sumner Handy,	Orrin Edward Tiffany,
Etta Herschberger,	Ella Louise Wagner,
Ninah May Holden,	Mary Gilmore Williams,
	Loura Bayne Woodruff.

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ELECTRICAL ENGINEER.

William Dearborn Ball, B.S.

CIVIL ENGINEER.

†Robert Campbell Gemmell, B.S. (C.E.). 1

MASTER OF LETTERS.

Frank Thomson Merry, B.L., Sara Genevieve O'Brien, B.L.,
Annah May Soule, B.L. 3

MASTER OF SCIENCE.

Lyman James Briggs, B.S., *Mich. Agr. Coll.*, Emerson Romeo Miller, Phar. M.,
B.S.,
Gertrude Buck, B.S., William Walter Parker, B.S., *Mich. Agr. Coll.*,
Wilbur Olin Hedrick, B.S., *Mich. Agr. Coll.*, Raymond Elmoine VanSyckle, B.S.,
Ellen Clara Hogeboom, B.S., Neil Hooker Williams, B.S. 8

MASTER OF PHILOSOPHY.

Charles Franklin Emerick, A.B., Willard Clark Gore, Ph.B.,
Wittenberg Coll., M.S., *Mich. Agr. Coll.*, Clarence Mortimer Mulholland,
Ph.B., *Albion Coll.*, 3

MASTER OF ARTS.

Archie Ernest Bartlett, A.B., Josephine Eliza Sondericker, A.B.,
Rudolph Frederick Flintermann, A.B., Carrie Taylor Stewart, A.B., *Univ. of Kansas*,
Cyrus B. Newcomer, A.B., *Carthage Coll.*, Delos Franklin Wilcox, A.B. 6

DOCTOR OF PHILOSOPHY.

Frank Haigh Dixon, Ph.B. 1

DEPARTMENT OF MEDICINE AND SURGERY.**DOCTOR OF MEDICINE.**

Florence Almeda Amidon,	Edwin Oscar Colvin,
†Richard Selden Anthony, M.D.,	Jean Mottram Cooke,
<i>Cooper Med. Coll.</i> ,	Thomas Benton Cooley, A.B.,
Adam John Baumhardt, Ph.C.,	Bernard Joseph Downey,
Louisa Teresa Black,	Peter Doyle,
Harry Harlow Brooks,	Hiram Marcellus Farnham,
William Elliott Brown,	Charles Edmund Fisher,
Sidney Payne Budgett,	Byron Sinclair Gailey,
William Thomas Burke,	Dirk Gleysteen, Jr., A.B.,
Charles Amos Burritt,	William Benjamin Govan,
David R. Clark,	Maria Louise Graham,

Harriet Louise Hawkins,	Lillian Belle Miller,
Harry Ashford Haze,	†Fred Hopkins Moore,
Arthur Wallace Herr,	†Frank Benjamin Moran, <i>as of the</i>
William Silas Hewitt,	<i>Class of 1894,</i>
John Ernest Hinkson, B.S., <i>Mich.</i>	John Andrew Morrissey,
<i>Agr. Coll.,</i>	Ellen Bradford Murray,
Charles Eggleston Hooker,	Earl Stimson Niblack,
George Franklin Inch,	Emory Leroy Niskern,
Frank Jacobi,	George Gallahyer Bratten Nusum,
Arthur Henry Johnson,	Henry Edward Odell,
William Alfred Kickland, B.S.,	Frank Albert Olms,
Flavius Josephus Knight,	Philip Henry Quick,
Minerva M. Knott,	John Franklin Ritter,
Herbert George Lampson,	Eugene Herbert Robertson, Ph.M.,
Eliza Ellen Leonard,	John Randolph Rogers, B.S.,
William Swift Loomis,	†Arthur James Sanderson, M.D.,
Henry H. Lucas,	<i>Cooper Med. Coll.,</i>
Robert Julius Lynn,	Duncan Charles Shields,
Roscoe Belden Martindale, A.B.,	Claude LeBaron Sigler,
<i>Hamilton Coll.,</i>	Charles Eugene Stewart,
Ezra Hinman Mathewson,	George W. Torrey,
Samuel Alexander Matthews,	Andrew Uren,
John Charles Maxwell,	Carl Cleghorn Warden, Ph.B.,
Neil Sutherland McDonald,	Frances Tudor Weed,
Roderick J. McDonald,	George Henry Williamson, Jr.,
Lewis Craig Miller,	William Jeremiah Woodlin.

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DEPARTMENT OF LAW.

BACHELOR OF LAWS.

Michael Barnett Aaron,	Sanford Gadcome Baker, B. S.,
Frank DeForest Adams,	<i>Northern Indiana Univ.,</i>
Robert Milligan Addleman,	Richard James Barr,
Ulysses Simpson Albertson,	Arthur Calvin Bartels,
Elmer Louis Allor, B.S.,	George Howard Bayliss, B.S., <i>North-</i>
Henry Boardman Anderson,	<i>ern Indiana Normal Univ.,</i>
John G. Anderson,	John Wesley Beemer, B.S., <i>North-</i>
George John Arbeiter, B.L., <i>Univ.</i>	<i>ern Illinois Normal School,</i>
<i>of Illinois,</i>	James Harvey Bigger,
Marvin Melville Atherton,	John William Bingham,
George Emerson Bailey,	Claude Corbly Bishop, B.S.,
Charles Baird,	<i>National Normal Univ.,</i>

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- | | |
|--|---|
| Jonathan James Bishop, | Albert Elmer Davis, A.B., <i>Wabash</i> |
| Joseph Edward Bland, | <i>Coll.,</i> |
| Henry Blatchford, A.B., <i>McGill Univ.,</i> | John Nelson Davis, |
| George Lowden Bowman, | George William Dayton, |
| Thomas Parks Bradfield, Ph.B., | Jesse LeRoy Deck, |
| Claude Arthur Brayton, | Charles Lemuel DeVault, |
| Henry Lewis Bright, A.B., <i>William Jewell College,</i> | States Dickson, B.S., <i>Lombard Univ.</i> |
| George Washington Peritory Brown, | Thornton Dixon, |
| Harry Elmer Brown, | William Dobbins, |
| John William Brown, | John Walter Dohany, |
| Emory David Brownlee, | Cornelius Francis Donahoe, |
| Harry Conant Bulkley, A.B., | William Henry Dorgan, |
| John Sidney Burnet, | Warwick Miller Downing, |
| Philo G. Burnham, B.S., <i>Antioch Coll.,</i> | Thomas Francis Doyle, |
| Anne Balfour Butler, | William Gray Duncan, |
| Arthur DeLancey Campbell, | Robert Winfield Dunn, |
| Guilford Elvene Campbell, | Paul Dillingham Durant, |
| Ira Randolph Carter, | Horace Levi Dyer, |
| Charles David Cary, | George Burlingame Dygert, Ph.B., |
| Llewellyn Barton Case, | Frank Lewis Edinborough, |
| Lemuel Oliver Caswell, | George Collingwood Edwards, |
| William Herbert Charnley, Ph B., | Evan Lawrence Evans, |
| Willis Sherman Clark, | George Adams Everett, B.S., <i>Fayette Normal Univ.,</i> |
| John Clarkson, | Richard Lazenby Ewbank, |
| Walter Roy Clayton, | George Francis Carpenter Eyre, |
| Charles Haskell Coates, | John William Ferrier, |
| Bret Harte Cockett, | George Samuel Field, |
| Frank Christopher Cook, | William Atlas Finch, |
| Ronoldo Merdeith Cooper, | Maurice Elmer Fitzgerald, |
| James Allen Cotner, | Frederick Junius Flagg, |
| William Alexander Coutts, | Orange Charles Flanagan, |
| Arthur Howe Covert, A.B., | William Harvey Flanery, B.S., <i>National University.</i> |
| Robert Byron Crane, | Walter Scott Flint, |
| Lee Randall Crawford, | Vernon Okey Ford, |
| Hubert Richmond Crozier, | Isaac Foster, |
| Andrew Judge Curran, B.S., <i>Kansas Normal Coll.,</i> | Elmer Ellsworth Gardner, |
| Charles Wesley Curtis, | Frank Garrett, A.B., <i>Hamilton Coll.,</i> |
| Henry Howard Cushing, | Oscar C. Garrett, |
| Lewis J. Dann, | John Engelbert Gasteiger, |
| | Curtis Frank Gilkey, |

Garland R. Gillespie,	Kay William Hunt, B.S., <i>Drake</i>
John Wilber Gillespie,	<i>University,</i>
Allan Pegram Gilmour, A.B., <i>Univ. of Virginia,</i>	George Ingersoll, Jr., A.B.,
George Luther Glitsch,	Jerome Ingersoll,
Julius William Gogarn,	William Israel,
William Ward Goodykoontz,	Samuel Abraham Jetmore,
Thomas Peter Grace,	Henry Root Jewett,
Frank Pliny Graves, A.B.,	John Lyman Jones,
Lucien Gray,	Roland King Jones,
Miller Guy,	Otto Kaspar,
Harry Graydon Hadden,	Jacob Frank Kass,
Robert Foote Hall, A.B.,	Frank Kauke, B.S., <i>Northern</i>
Fred Benner Hamill,	<i>Indiana Normal University,</i>
Edward Thomas Hamilton,	Hugh Glenn Keegan,
John Lawrence Harrington, B.S.,	William Albert Keerns, B.S.,
<i>Northern Indiana Univ.,</i>	<i>Central Indiana Normal Univ.,</i>
Pleasant Stephen Harris,	Jonas E. Kendeigh,
Burton Lloyd Hart,	Charles Dean Kennedy,
Ray Hart, B.L.,	Chester Lee Kerr,
James William Harter,	Clement Fred Kimball, B.M.E.,
Thomas Scott Hayden, Jr.,	<i>Iowa Agricultural College,</i>
John Thomas Hays,	Joseph Wesley Blackburn Kimberlin,
Charles Belknap Henderson,	Hector Mahlon King,
Charles Elsworth Henderson, A.B.,	Austin Guthrie Kingsbury,
<i>University of Oregon</i>	James Joseph Kirby,
John Frederick Henry,	Benjamin Killey Knight,
Ackley Beach Hinman,	Don Carlos Rea Kocher,
Richard Allen Hitchens,	George Konrath,
Willis Edwin Hodgman,	Frank John Charles Krahn,
Charles Henry Hogg, A.B.,	Thomas Stephens Lackey,
<i>Leland Stanford Univ.,</i>	John Scott Lairy,
Rufus Melvin Hook,	Frederick Landis,
William George Hoover,	Rufus Gillett Lathrop, A.B.,
Horace Banfill Hord,	William Henry Leahy, Jr.,
Edward Horsky,	Albert Lincoln Lehman,
Moulton Jones Hosack,	Melvin E. Leliter,
Schuyler Colfax Hubbell,	Curg H. Lingenfelter,
Philip Sawyer Hudson,	Lindley Grant Long,
Denver Corrie Hughes, B.S.,	Jasper Henry Loub,
<i>Mt. Union College,</i>	Israel Ludlow,
William Ketner Hugus,	Arthur Lussky,
Joseph Wesley Humphry,	Daniel Franklin Lyons, B.L.,
	James Patrick Mahan,

Lawrence Edward Mahan,	George Edwin Noyes,
David Francis Maher,	John Marr O'Connor,
Harry Jacob Makiver, Ph.B.,	Walter Joseph O'Donnell,
<i>Lafayette College,</i>	Burton Jay Onstine,
Edwin Dennis Mallory,	Louis Thomas Orr,
Meredith Read Marshall,	Gottfried Fred Ottmar,
William Nichols Marshall,	James Veech Oxtoby,
James Henry Mays,	Harry Hemphill Parsons,
George Van Voorhis McConahey,	James Harvey Payne,
Edward Martin McCulloch, B.S.,	John S. Pearl,
<i>Wabash College,</i>	Charles Phillips,
Charles Sumner McDowell,	Warren Pierpont,
Peter McGovern,	William W. Potter,
Henry J. McKay,	Homer Grant Powell,
Richard Matthew McMahon,	Fred Howard Pratt,
William Oscar McNary, B.S.,	Gilmore Delaplaine Price, B.S.,
<i>Tarkio College,</i>	<i>Dartmouth College,</i>
William Clopton Michaels,	Harry Ford Price,
Harry S. Miller, A.M., <i>Mt. Union Coll.,</i>	Frank Quintus Quinn,
Harvey Alvin Miller, B.S., <i>Grove</i>	Sanford Levi F. Reece,
<i>City College,</i>	Henry George Reek, B.S., <i>Central</i>
Wiley Wright Mills, A.B.,	<i>Normal College,</i>
Joseph W. Mitchell,	Stanley Alfred Rees, B.S., <i>National</i>
William Hudson Mitchell,	<i>Normal University,</i>
Luke Hoodley Mithen,	David Calvert Reeves,
Edward Julius Moinet,	Frank Bernard Reynolds,
Edgar William Morris, B.L.,	Alfred Drury Riess,
<i>University of Illinois,</i>	Ross Morrell Rininger,
James Laury Donaldson Morrison,	Charles Andrew Robinson,
Edgar Martin Morsman, Jr., Ph.B.,	Marvin Thomas Robison,
Edwin Andrew Murphy, B.S.,	Edward Sidney Rogers,
<i>Michigan Agricultural Coll.,</i>	Glenn Beal Roseberry,
William Ernest Murphy,	Joe Van Inwegen Rosencrance,
William Hanson Murray,	Warren Scott Rundell,
Frank Thurman Nash, A.B., <i>Penn</i>	William Kent Sagendorph, B.S.,
<i>College,</i>	<i>Michigan Agricultural Coll.,</i>
Louis James Neun,	George Abby Salisbury,
Frederick Whittlesey Newton, A.B.,	Albert Charles Salter,
Daniel Benjamin Ninde,	Edwin Croxton Saltzman,
Jacob Bernard Nockels,	Marmion Hilton Scott,
James Joseph Noon,	Bernard Benjamin Selling, Ph.B.,
William Warren North,	Lewis Pinkerton Shackelford,
Nathan Abbott Norton,	Almond Gould Shepard,

Charles Stewart Shippy,
Charles McDonald Showalter,
George Henry Simpson,
William Hudson Smiley,
Frank Hubbard Smith, B.S.,
†George William Smith,
William Sherman Snook,
Newton Carmen Spencer,
Jacob Steketee,
Alexander Stewart,
Frank Adams Stivers,
Edwin Hollis Storie,
Walter Benjamin Strang,
Martin Louis Sullivan,
Ralph Ignatius Sullivan,
Zachary Taylor,
Wilbur Roscoe Thirkield,
Livingston A. Thompson,
William Harold Thompson,
Theodore Axel Thoren,
Francis Marion Tolleson, Ph.B.,
Searcy College,
Isaac Torner,
Horace Tupper, Jr.,
Arthur J. Tuttle, Ph.B.,
Melvin LaMont Tyner,
Willison Kerr Vance,

Raymond Elmoine VanSyckle, B.S.,
Albani Joseph Violette,
Joseph Peter Vlk,
Ulysses Grant Vogan,
Harry Rowen Wair,
Walter Scott Wall,
Thomas Moore Wallace,
Winfred James Wallace,
Edward Marion Walsh,
Philip Henry Waters,
Agnes Fraser Watson,
Elbert Alexander Watson,
William Walter Wedemeyer, B.L.,
Frank Anthony Wenter,
Theophilus Myron Westover,
Emil C. Wetten,
Ernest Henry Wetzell,
William Kinnie Whitfield,
Guy Joseph Wicksall,
Adolphus William Wier,
Fred Leon Williams,
John Henry Wilson,
Jacob Good Wine,
Judd Winton,
Henry Martin Zimmermann,
Charles Zollinger, Ph.B., *Cornell*
College.

301

MASTER OF LAWS.

Aaron Joseph Bessie, LL.B.,	Evan Benson Goss, LL.B.,
Milton Lee Clawson, LL.B.,	William Bell Hatch, LL.B., <i>George-</i>
Charles John Cole, A.B., <i>Oberlin</i>	<i>town Univ.,</i>
<i>Coll., LL.B.,</i>	Robert Bruce Mitchell, LL.B.,
George Washington Fuller, LL.B.,	George William Smith, LL.B.,
Francis Marion Springer, LL.B.,	

9

SCHOOL OF PHARMACY.

PHARMACEUTICAL CHEMIST.

Henry John Bowerfind,	George Doehne, Jr.,
Claude Melnotte Bunn,	Gilbert Allen Doty,
Cornelius De Jonge,	Charles Francis Drake.

Henry Albert Herzer,	Ernest Gray Reese,
John N. Judy,	Charles Henry Steincamp,
Edgar Livingstone Knapp,	Wilber John Teeters, B. S., <i>Mount</i>
James W. T. Knox,	<i>Union Coll.,</i>
Elgin Mallett,	Edward Eugene Washburn,
Fay Melville Marsh,	John Lewis Washburn,
Garry Windsor Messinger,	Horace Houghton Waters. 19

HOMŒOPATHIC MEDICAL COLLEGE

DOCTOR OF MEDICINE.

William Hodgins Atterbury. I

COLLEGE OF DENTAL SURGERY.

DOCTOR OF DENTAL SURGERY.

Douglas Anderson,	Walter Allen Lampman,
Archibald Elmer Ball,	Harry Hallenbeck Lauderdale,
Amos Barnes,	Albert Leland LeGros,
Orville M. Barton,	William Gustave Lentz,
Alfred Lee Beatie,	Frank Eugene McLaughlin,
Joseph Henry Billmeyer, Jr.,	Joseph Merckens,
Joseph Augustin Bucknall,	Daniel Merner,
Fred Crittenden Clapp,	John Henry Neeley,
Lewis Emmett Coonradt,	George A. Parmenter,
Mary Bruyn Crans, B.S., <i>University</i>	Clarence Fletcher Piper,
<i>of North Dakota,</i>	Harry Benedict Respinge, D.E.D.G.,
Fred Ellsworth Dodge,	<i>Dental Department, University</i>
John B. Dowdigan,	<i>of Geneva,</i>
Edmund Dubuis, D.E.D.G., <i>Dental</i>	Burt Townsend Ruthruff,
<i>Department, Univ. of Geneva,</i>	Francis Frederick Scott,
Walter Gideon Dunham,	Newton J. Smith, Jr.,
George Frederick Fiddymont,	Charles Bradford McCall Southwick,
Van Camp Garratt, D.D.S., <i>Ameri-</i>	Joseph Herman Stromier,
<i>can College of Dental Surgery,</i>	Clifford Paul Sweny,
Fred Pratt Graves,	Andrew Roane Thorpe, A.B., <i>St. Vin-</i>
Arche Greenwood Hicks,	<i>cent's Coll.,</i>
Harry Benson Hinman,	Christian Leonard Theurer,
Marshal Luther Howver,	George McAlpine Tyng,
Arthur Stimson Kennedy,	Perley Tapley Von Ornum,
John Fredrik Henry Kuyper,	Elisabeth von Bremen,
Friedrich von Widekind.	45

DOCTOR OF DENTAL SCIENCE.

Will Hamilton Van Deman, D.D.S., Charles Traver Whinery, D.D.S. 2

HONORARY DEGREES.

MASTER OF LAWS.

ROBERT HENRY MCMURDY,
Graduate of the University in the Class of 1880. 1

MASTER OF ARTS.

ANGIE CLARA CHAPIN,
Professor of Greek in Wellesley College.
WILLIAM FRACKELTON,
Clergyman; graduate of the University in the Class of 1867.
ANDREW JACKSON POPPLETON,
Student in the University, 1847-50.
WYLLYS CADWELL RANSOM,
Graduate of the University in the Class of 1848. 4

DOCTOR OF LAWS.

HENRY MILLS HURD,
Superintendent of the Johns Hopkins Hospital and Professor in Johns
Hopkins University.
ALFRED NOBLE,
Civil Engineer; graduate of the University in the Class of 1870. 2

Total number of degrees conferred, 721.

FACULTIES AND STUDENTS.*

Department of Literature, Science, and the Arts.

FACULTY.

JAMES B. ANGELL, LL.D., *President*.
ALBERT B. PRESCOTT, Ph.D., M.D.
REV. MARTIN L. D'OOGHE, LL.D., *Dean*.
WILLIAM H. PETTEE, A.M.
EDWARD L. WALTER, Ph.D.
ISAAC N. DEMMON, A.M.
ALBERT H. PATTENGILL, A.M.
WOOSTER W. BEMAN, A.M.
VICTOR C. VAUGHAN, Ph.D., M.D.
THOMAS M. COOLEY, LL.D.
CHARLES S. DENISON, M.S., C.E.
HENRY S. CARHART, LL.D.
RAYMOND C. DAVIS, A.M.
VOLNEY M. SPALDING, Ph.D.
HENRY C. ADAMS, Ph.D.
CALVIN THOMAS, A.M.
BURKE A. HINSDALE, LL.D.
RICHARD HUDSON, A.M.
ALBERT A. STANLEY, A.M.
FRANCIS W. KELSEY, Ph.D.
OTIS C. JOHNSON, Ph.C., A.M.
PAUL C. FREER, Ph.D., M.D.
ANDREW C. McLAUGHLIN, A.B., LL.B.
ASAPH HALL, Jr., Ph.D.
ISRAEL C. RUSSELL, M.S., C.E.

*A dagger (†) preceding a student's name indicates that he pursues studies for the whole or a part of the year, in more than one department of the University.

WARREN P. LOMBARD, A.B., M.D.
JACOB E. REIGHARD, Ph.B.
THOMAS C. TRUEBLOOD, A.M.
JAMES A. CRAIG, Ph.D.
JOHN C. ROLFE, Ph.D.
FREDERICK G. NOVY, Sc.D., M.D.
GEORGE HEMPL, Ph.D.
EDWARD D. CAMPBELL, B.S.
FRED M. TAYLOR, Ph.D.
JAMES B. FITZGERALD, M.D.
ALFRED H. LLOYD, Ph.D.
GEORGE A. HENCH, Ph.D.
PAUL R. DE PONT, A.B., B.S., *Registrar*.
JOSEPH H. DRAKE, A.B.
FRED N. SCOTT, Ph.D.
ALEXANDER ZIWET, C.E.
GEORGE W. PATTERSON, JR., A.M., S.B.
G. CARL HUBER, M.D.
JOHN O. REED, Ph.M.
DEAN C. WORCESTER, A.B.
FREDERICK C. NEWCOMBE, B.S., Ph.D.
MAX WINKLER, Ph.D.
JOSEPH L. MARKLEY, Ph.D.
MORITZ LEVI, A.B.
ELMER A. LYMAN, A.B.
GEORGE O. HIGLEY, M.S.
JONATHAN A. C. HILDNER, A.M.
DAVID M. LICHTY, M.S.
JOHN R. EFFINGER, JR., Ph.M.
LORENZO N. JOHNSON, A.M.
ERNST H. MENSEL, A.M.
EARLE W. DOW, A.B.
MOSES GOMBERG, Sc.D.
KARL E. GUTHE, Ph.D.
TOBIAS DIEKHOFF, A.B.
CLARENCE L. MEADER, A.B.
WALLACE S. ELDEN, A.M.
ARTHUR G. HALL, B.S.
WILLIAM D. JOHNSTON, A.M.
GEORGE REBEC, Ph.B.
FRANK R. LILLIE, Ph.D.
CHARLES H. COOLEY, Ph.D.
WILLIAM H. WAIT, Ph.D.

•

JAMES W. GLOVER, Ph.D.
 ERNST VOSS, Ph.D.
 LOUIS A. STRAUSS, Ph.M.
 EDWIN C. GODDARD, Ph.B.
 CHARLES R. GILLIS, Ph.B.
 EDGAR E. BRANDON, A.B.
 HENRY F. L. REICHLE, A.M.
 EDGAR PIERCE, Ph.D.
 HENRY L. COAR, A.M.
 VICTOR E. FRANCOIS,
 PERRY F. TROWBRIDGE, Ph.D.
 *PENOVER L. SHERMAN, Ph.D.

Other Instructors and Assistants.

ALICE L. HUNT.
 JOHN B. JOHNSTON, Ph.B.
 WARREN H. LEWIS, B.S.
 CARLTON D. MORRIS, M.D.
 WILLARD C. GORE, Ph.M.
 JESSE F. ORTON, A.M.
 CHARLES H. GRAY, B.L.
 EDWIN C. ROEDDER, A.M.
 CARLTON R. ROSE, Ph.B.
 JAMES B. POLLOCK, B.S.
 ALBERT A. PASSOLT, B.S.
 †GERTRUDE BUCK, M.S.
 ‡ARTHUR LACHMAN, Ph.D.

STUDENTS.||

HOLDERS OF FELLOWSHIPS.

NAME.	RESIDENCE.
Arthur Lachman, B.S., <i>Univ. of California</i> , 1893, Ph.D., <i>Univ. of Munich</i> , 1895, <i>Holder of the</i> <i>Parke, Davis and Company Fellowship in</i> <i>Chemistry,</i>	<i>San Francisco, Cal.</i>
Mary Gilmore Williams, A.B., 1895, <i>Holder of the</i> <i>Elisha Jones Classical Fellowship,</i> Latin; Greek; Political Economy.	<i>Corning, N. Y.</i>

*Appointed Instructor in General Chemistry, January, 1896.

†Appointed Assistant in English, January, 1896.

‡Appointed Assistant in General Chemistry, January, 1896.

||The principal subjects of study pursued by candidates for an advanced degree are indicated under their respective names; the subject first named being the major study.

**CANDIDATES FOR AN ADVANCED DEGREE AND OTHER
RESIDENT GRADUATES.**

NAME.	RESIDENCE.
Charles Wallace Adams, A.B., 1894, Political Economy; American History; European History.	<i>Ann Arbor.</i>
Warren Babcock, Jr., B.S., <i>Mich. Agr. Coll.</i> , 1890, <i>Agricultural College</i> . Mathematics; Astronomy; Mechanics.	
Mary Bartol, A.B., <i>Bucknell Univ.</i> , 1894, A.M., <i>ibid.</i> , 1895, Greek; German; French.	<i>Lewisburg, Pa.</i>
Spencer Peter Carmichael, Ph.B., <i>Lafayette Coll.</i> , 1893, Physics; Mathematics; Chemistry.	<i>LeRoy, N. Y.</i>
Lawrence Thomas Cole, A.B., 1892, S.T.B., <i>General Theological Seminary</i> , 1895, History of Philosophy; Ethics; History.	<i>Ann Arbor.</i>
Samuel Richard Cook, B.S., 1895, General Chemistry; Physics; Astronomy.	<i>Ann Arbor.</i>
William Eli Davis, B.S., <i>Mich. Agr. Coll.</i> , 1889, Physics; Mathematics; General Chemistry.	<i>Wacousta.</i>
Earle Wilbur Dow, A.B., 1891, English History; Industrial History; Political Economy.	<i>Ann Arbor.</i>
Peter William Dykema, B.L., 1895, English Literature; Rhetoric; French.	<i>Grand Rapids.</i>
Wallace Stedman Elden, A.B., <i>Bowdoin Coll.</i> , 1889, A.M., <i>ibid.</i> , 1892, French; Latin; Spanish.	<i>Ann Arbor.</i>
Charles Franklin Emerick, A.B., <i>Wittenberg Coll.</i> , 1889, M.S., <i>Mich. Agr. Coll.</i> , 1891, Ph.M., 1895, Political Economy; History; Sociology.	<i>Ann Arbor.</i>
Oliver D. Frederick, B.S., <i>West Chester Normal School</i> , 1895, Mathematics; Physics; Pedagogy.	<i>West Chester, Pa.</i>
Willard Clark Gore, Ph.B., 1894, Ph.M., 1895, Rhetoric; English Literature; Philosophy.	<i>Ann Arbor.</i>
Charles Henry Gray, B.L., 1895, English Literature; Rhetoric; Pedagogy.	<i>Ann Arbor.</i>
George Depue Hadzsits, A.B., 1895, Greek; Latin; Music.	<i>Detroit.</i>
Jacob George Halaplian, A.B., 1894, Hebrew; Assyrian; Hellenistic Greek.	<i>Saginaw, West Side.</i>
Arthur Graham Hall, B.S., 1887, Physics; Mechanics; Heat.	<i>Ann Arbor.</i>

-
- Walter Monroe Hamilton, A.B., 1894, *Ann Arbor.*
 Mathematics; Physics; Astronomy.
- Clemma Belle Hayes, A.B., 1893, *Eric, Pa.*
 American History; European History; Political Economy.
- Wilbur Olin Hedrick, B.S., *Mich. Agr. Coll.*, 1891,
 M.S., 1895, *Agricultural College.*
 Political Economy; Finance; History.
- Elizabeth C. Hench, Ph.B., 1895, *Carlisle, Pa.*
- Ellen Clara Hogeboom, B.S., 1877, M.S., 1895, *Saginaw, West Side.*
- Samuel Allen Jeffers, A.B., *Central Wesleyan Coll.*,
 1892, *New Florence, Mo.*
 Latin; Psychology; Pedagogy.
- John Black Johnston, Ph.B., 1893, *Ann Arbor.*
 Animal Morphology; Physiological Psychology; Physiology.
- Riotaro Kodama, *Doshisha Coll.*, *Wakayama, Japan.*
- John Edward Lautner, B.L., 1895, *Traverse City.*
 American Literature; Rhetoric; German.
- Otto Edward Lessing, A.B., 1895, *Ofterdingen, Wur-*
temberg.
 German; English Literature; Old English.
- Laura Alberta Linton, B.S., *University of Minne-*
sota, 1879, *Minneapolis, Minn.*
- Almira Lovell, A.B., 1884, *Flint.*
 Latin; Greek; Classical Archæology.
- Albert Brown Lyons, A.B., *Williams Coll.*, 1865,
 M.D., 1868, *Honolulu, H. I.*
- Charles Edward Marshall, Ph.B., 1895, *Fredonia, N. Y.*
 Bacteriology; Hygiene; Organic Chemistry.
- Mary McPherson, A.B., *Wellesley Coll.*, 1893,
 A.M., *Columbia Univ.*, 1895, *Washington, D. C.*
 Vertebrate Morphology; Bacteriology; Embryology.
- Ernst Heinrich Mensel, A.B., *Carthage Coll.*, 1887,
 A.M., *ibid.*, 1890, *Ann Arbor.*
 Germanic Philology; German Literature; Old English.
- Frank Wesley Nagler, B.S., 1892, *Ann Arbor.*
 Physics; Organic Chemistry; Analytical Chemistry.
- Ralph Winthrop Newton, B.S., 1894, *Ann Arbor.*
- Walter Hammond Nichols, B.S., 1891, *Ann Arbor.*
 Political Economy; Sociology; History.
- Jesse Francis Orton, A.B., 1893, A.M., *Cornell Uni-*
versity, 1895, *Ann Arbor.*
 Political Economy; Science of Jurisprudence; Constitutional Law.
- Walter Thomson Peirce, A.B., *Ohio Wesleyan Univ.*,
 1894, *South Charleston, O.*
 French; English Literature; Italian.

- Marian Williams Perrin, A.B., *Wellesley College*,
1891, *Rochester, N. Y.*
English Literature; Rhetoric; Philosophy.
- Clayton Amos Peters, B.S., 1895, *Ann Arbor.*
Botany; Experimental Vegetable Physiology; Animal Embryology.
- John Burton Phillips, A.B., *Indiana University*,
1889, A.M., *ibid.*, 1891, *Lansing.*
Political Economy; Sociology; Finance.
- James Barkley Pollock, B.S., *University of Wisconsin*,
1893, *Orangeville, Ill.*
Botany; Experimental Vegetable Physiology; Organic Chemistry.
- Melvin Park Porter, A.B., 1893, A.M., 1894, *West Sunbury, Pa.*
General Psychology; Experimental Psychology; Hebrew.
- Carlton Raymond Rose, Ph.B., 1894, *Ann Arbor.*
General Chemistry; Organic Chemistry; Analytical Chemistry.
- Fannie Ellis Sabin, Ph.B., 1895, *Hinsdale, Ill.*
Latin; Classical Archæology; Roman Political Institutions.
- Thomas Chalkley Severance, A.B., 1889, A.M.,
1893, *Walled Lake.*
English Literature; Rhetoric; Ethics.
- John Ray Sherrick, Ph.B., *Earlham College*, 1885, *Ypsilanti.*
Latin; Classical Archæology; Pedagogy.
- Sibyl Stanley, B.S., *Earlham College*, 1890, *Adrian.*
- Caroline Maria Taylor, A.B., *Kalamazoo College*,
1894, *Kalamazoo.*
European History; American History; Rhetoric.
- Orrin Edward Tiffany, A.B., 1895, *Spring Arbor.*
United States History; Finance; European History.
- Ira Dudley Travis, Ph.B., *Albion College*, 1889,
Ph.M., 1894, *Ann Arbor.*
American History; Political Economy; European History.
- Mary Etta Trueblood, Ph.B., *Earlham College*,
1893, *Jamestown, O.*
Mathematics; German; Astronomy.
- Arletta Leora Warren, Ph.B., *University of Wooster*,
1889, *Wooster, O.*
- Royal Brunson Way, Ph.B., *Albion College*, 1894, *Elsie.*
American History; Political Economy; Comparative Constitutional Law.
- Howard White, Jr., B.S., *Swarthmore College*,
1895, *Lansdowne, Pa.*
Mathematical Electricity; Heat and Light; Mechanical Engineering.
- Eugene Cyrus Woodruff, B.S., 1894, *Ludington.*
Chemistry; Physics; Music.

The following students, enrolled in other departments, are also candidates for an advanced degree in the Department of Literature, Science, and the Arts. See page 119.

ENROLLED IN THE DEPARTMENT OF MEDICINE AND SURGERY.

NAME.	RESIDENCE.
John Fletcher Byington, A.B., 1895, Mathematics; General Chemistry; Physiological Chemistry.	<i>Battle Creek.</i>
Lucy Nash Eames, B.S., 1895, Physiology; Histology; Physiological Chemistry.	<i>Ann Arbor.</i>
Anna Willard Locke, A.B., <i>Wellesley College</i> , 1892, <i>Nashua, N. H.</i> Bacteriology; Physiological Chemistry; Histology.	
David Porter Mayhew, Ph.B., 1893, Physiology; Bacteriology; Physiological Chemistry.	<i>Detroit.</i>

ENROLLED IN THE DEPARTMENT OF LAW.

NAME.	RESIDENCE.
Arnold Lyman Davis, A.B., <i>University of South Dakota</i> , 1895, Sociology; Political Economy; International Law.	<i>Watertown, S. Dak.</i>
Walter Park Martindale, Ph.B., 1894, United States Constitutional History; Political Economy; Mathematics.	<i>Fulton, Ill.</i>

CANDIDATES FOR A MASTER'S DEGREE, STUDYING IN ABSENTIA.

NAME.	RESIDENCE.
Allen Lysander Colton, Ph.B., 1889, A.B., 1890, Astronomical Photography; Optics; Practical Astronomy.	<i>Mount Hamilton, Cal.</i>
Joseph Villiers Denney, A.B., 1885, English Literature; Rhetoric; Philosophy.	<i>Columbus, O.</i>
Humphrey Snell Gray, A.B., 1893, LL.B., 1894, Constitutional Law; Political Economy; History.	<i>Ludington.</i>
Frank Addison Manny, A.B., 1893, American Literature; European History; Rhetoric.	<i>Moline, Ill.</i>
Alfred Berthier Olsen, M.D., 1894, B.S., 1895, Histology; Bacteriology; Physiological Chemistry.	<i>Battle Creek.</i>
Esther Lakin Sanborn, A.B., 1895, Greek; German; History.	<i>West Roxbury, Mass.</i>
Bernard Benjamin Selling, Ph.B., 1894, LL.B., 1895, Constitutional Law; International Law; English Literature.	<i>Detroit.</i>
Lillie Maria Shaw, A.B., 1884, Greek; German; Botany.	<i>Saginaw, East Side.</i>
Katharine Eliza Sumner, Ph.B., 1891, English Literature; History; Pedagogy.	<i>Toledo, O.</i>

UNDERGRADUATES.*

NAME.	DEGREE.	CREDIT.	RESIDENCE.
Florence Lavinia Abbott,	Ph.B.	23	<i>Ann Arbor.</i>
Cuthbert Clarke Adams,	Ph.B.	13	<i>Kenilworth, Ill.</i>
Mary Joice Adams,	Ph.B.	88	<i>Normal, Ill.</i>
Romanzo Colfax Adams,			<i>Bloomington, Wis.</i>
Robert Sumner Albee,	B.S.	105	<i>Oshkosh, Wis.</i>
Raymond B. Albertson,			<i>Washington, Ia.</i>
Guy Henry Albright,	Ph.B.		<i>Tyndall, S. Dak.</i>
Kirkland Barker Alexander,	Ph.B.	*82	<i>Detroit.</i>
George Henry Allen,	A.B.	32	<i>Grand Rapids.</i>
Robert Emmet Allen,			<i>Independence, Ia.</i>
Susie Helen Allen,	Ph.B.	96	<i>Grand Rapids.</i>
Bayard Hoyt Ames,	A.B.	74	<i>Highlands, Col.</i>
Mary Irene Amidon,	B.L.	21	<i>Cedar Rapids, Ia.</i>
Elsie Grace Anderson,	A.B.	25	<i>Ann Arbor.</i>
Flora Larned Anderson,			<i>Midland.</i>
Hannah Matilda Anderson,	A.B.	47	<i>Ann Arbor.</i>
Mary Anderson,			<i>Detroit.</i>
Mary Josephine Anderson,	B.L.		<i>Battle Creek.</i>
Nellie Florence Anderson,	Ph.B.	50	<i>Vincent, Ia.</i>
Charles Sumner Andrus,	B.L.	23	<i>Ann Arbor.</i>
Julia Morehouse Angell,	Ph.B.	66	<i>Chicago, Ill.</i>
Frank Jones Arbuckle,	B.L.	2	<i>Toledo, O.</i>
Frederic Everart Arnold,	B.S.	41	<i>Ann Arbor.</i>
Frederic Niles Arnold, Jr.,			<i>Dayton, O.</i>
Kate Oretta Arnold,	A.B.	92	<i>Ypsilanti.</i>
Marguerite Ascher,			<i>Saginaw, West Side.</i>
Arthur Frederick Ashbacher,	Ph.B.	4	<i>Ludington.</i>
Frederick Stiles Atwood,	Ph.B.	27	<i>Saginaw, East Side.</i>
John Auer,	B.S.	20	<i>Chicago, Ill.</i>
Benjamin Miller Austin,			<i>Kalamazoo.</i>
Frederick Clark Averill,	B.S.	30	<i>Perrysburg, O.</i>
Harriet Terisa Averill,	B.S. (Bio.)		<i>Cedar Rapids, Ia.</i>
Lois LeBaron Avery,	B.L.	26	<i>Ann Arbor.</i>
Lucius Babcock,	B.S.		<i>Ionia.</i>

* The abbreviations in the column headed DEGREE indicate the degree for which the student is studying. Where no abbreviation is given, the student is pursuing miscellaneous studies without being registered as a candidate for a degree. The figures in the column headed CREDIT indicate the number of hours of work taken by candidates for degrees prior to the beginning of the current academic year, 1895-96, and completed without conditions, or credited to them on advanced standing. By an hour of work is meant the equivalent of one exercise a week for one semester. Compare page 103.

Stephen Cone Babcock,	B.S. (Chem.)	55	<i>Buffalo, N. Y.</i>
Frank Staples Bachelder,	B.L.		<i>St. Charles, Minn.</i>
Standish Backus,	A.B.	25	<i>Detroit.</i>
Theodore Bacmeister, Jr.,	A.B.	32	<i>Toulon, Ill.</i>
Georgia Farrand Bacon,			<i>Pontiac.</i>
Annie Louise Bacorn,	B.L.	100	<i>Ann Arbor.</i>
Samuel Herman Baer,	B.S. (Chem.)	108	<i>Fort Smith, Ark.</i>
Naomi Ashley Bailey,	A.B.	31	<i>Port Huron.</i>
Kathleen Baird,			<i>Ann Arbor.</i>
Anna Mary Baker,			<i>Terre Haute, Ind.</i>
Frank Edward Baker,			<i>Detroit.</i>
George John Baker,			<i>Detroit.</i>
Inez Adèle Balch,			<i>Elgin, Ill.</i>
Lucene Rose Baldwin,	B.L.	69	<i>Norwalk, O.</i>
Edna Lenore Ballard,	B.L.	70	<i>Ann Arbor.</i>
Frederick Charles Ballard,	A.B.	59	<i>North Branch.</i>
Katherine Forrest Ballentine,	A.B.		<i>Port Huron.</i>
Grace Franauer Bammel,	B.L.	62	<i>Bay City.</i>
Martha White Bancker,	A.B.	56	<i>Jackson.</i>
Rush Banks,	B.L.	56	<i>Novi.</i>
James William Bannon, Jr.,	Ph.B.		<i>Portsmouth, O.</i>
Bertha Emily Barber,			<i>Norwalk, O.</i>
Ida Leora Barber,	A.B.	51	<i>Grand Rapids.</i>
Bertha Carmelia Barney,	B.L.	83	<i>Ann Arbor.</i>
Frances Agnes Barr,			<i>Centralia, Kan.</i>
Sadie J. Barras,	B.L.	8	<i>Escanaba.</i>
Phillip George Bartelme,	B.L.		<i>Austin, Ill.</i>
Ruth Anne Bartley,			<i>Fulton, Mo.</i>
Caroline Bary,	Ph.B.	34	<i>Detroit.</i>
Elmer Sereno Bassett,	B.S.	57	<i>Ann Arbor.</i>
Estelle Sophie Batchelder,	Ph.B.	38	<i>Grass Lake.</i>
Mary Luella Batchelder,	B.L.	92	<i>Warrensburg, Ill.</i>
Edgar Bates,			<i>Bear Lake.</i>
Nettie Hopkins Bates,			<i>Eagle.</i>
Francis Leon Bauer,	B.S.		<i>Hastings.</i>
Donald Alexander Baxter,	B.L.	23	<i>Lima, O.</i>
Ellen Phelps Beach,			<i>Battle Creek.</i>
John Watson Beach,	A.B.	90	<i>Lexington.</i>
Harriet Elizabeth Beard,	Ph.B.	31	<i>Detroit.</i>
Thomas Beath, Jr.,	Ph.B.		<i>Detroit.</i>
Cora Jipson Beckwith,	B.L.		<i>Grand Rapids.</i>
Ruth Gilbert Beckwith,			<i>Ann Arbor.</i>
Samuel Edmund Beeman,	B.L.	56	<i>Waterloo.</i>

Clara Rebekah Bell,	A.B.	17	<i>Ann Arbor.</i>
Louie Mary Bell,			<i>Ann Arbor.</i>
Wilfred Temple Bell,			<i>Marathon, Ia.</i>
Winifred Ernestine Beman,	A.B.	22	<i>Ann Arbor.</i>
Edwin Jenison Bement,	Ph.B.	58	<i>Lansing.</i>
Howard Bement,	Ph.B.	104	<i>Lansing.</i>
Chester Leigh Benedict,	Ph.B.		<i>Port Huron.</i>
Arthur Harold Benefiel,	B.S.		<i>Ann Arbor.</i>
Percy Whitman Benjamin,	B.S. (Bio.)	20	<i>Flushing.</i>
William Emil Besançon,	B.L.	8	<i>Detroit.</i>
Rudolph Best,	B.S.	50	<i>Davenport, Ia.</i>
Edna Bevans,	Ph.B.		<i>Englewood, Ill.</i>
Laura Helen Bevans,	Ph.B.	28	<i>Englewood, Ill.</i>
Lillian Marion Bigham,	A.B.	52	<i>Ann Arbor.</i>
Georgiana Bilby,	Ph.B.		<i>Fenton.</i>
Elton Pope Billings,	A.B.	98	<i>Grand Rapids.</i>
John Chester Bills,	Ph.B.		<i>Allegan.</i>
Harriet Elizabeth Bingham,	B.L.	90	<i>Dubuque, Ia.</i>
Ida Elizabeth Bingham,			<i>Milwaukee, Wis.</i>
Roswell Fairchild Bishop,	Ph.B.	4	<i>Ludington.</i>
Charles Edward Blanchard,	B.L.		<i>Blissfield.</i>
Irene Martha Blanchard,	A.B.	55	<i>Minonk, Ill.</i>
George Neil Blatt,	Ph.B.	4	<i>Elwood, Ill.</i>
Walter Henry Blome,	B.S.	5	<i>Monroe.</i>
Georgiana Cleis Blunt,	Ph.B.	81	<i>Ann Arbor.</i>
Annie Bock,	Ph.B.	28	<i>Akron, O.</i>
Henry William Charles Bodecker,	B.S. (Bio.)	105	<i>New York, N. Y.</i>
Harry Edward Bodman,	Ph.B.	103	<i>Toledo, O.</i>
Cora Louise Bodwell,	Ph.B.		<i>Grand Rapids.</i>
Helen Margaret Bogardus,	B.L.	50	<i>Saginaw, East Side</i>
Jennie Bogner,			<i>Detroit.</i>
Ivaleta Boice,	Ph.B.	62	<i>Lansing.</i>
Cecile Adele Bond,			<i>Ann Arbor.</i>
Dudley Phelps Bonnell,	B.S.	56	<i>Grand Rapids.</i>
Maurice Buford Bonta,	B.S.	60	<i>Harrodsburg, Ky.</i>
Charles John Borchardt,	B.L.	10	<i>Menominee.</i>
Frederick Harper Borchardt,	B.S. (Chem.)	53	<i>Chicago, Ill.</i>
Nelora Sarah Borden,	B.S.		<i>Chicago, Ill.</i>
Mabel Bosworth,	A.B.	65	<i>Ann Arbor.</i>
Clara Louisa Botsford,	B.L.	58	<i>Kalamazoo.</i>
Ethelwyn Botsford,			<i>Detroit.</i>
Robert Collyer Bourland,	A.B.	69	<i>Peoria, Ill.</i>

Alice May Boutell,	Ph.B.	38	<i>Detroit.</i>
†Ralph Raymond Bowdle,			<i>Mitchell, S. Dak.</i>
Eva May Bowen,	A.B.	69	<i>Marathon, O.</i>
Josephine Bowen,	A.B.		<i>Ann Arbor.</i>
Harold Martin Bowman,	B.L.	45	<i>Des Moines, Ia.</i>
Stella Matilda Boyd,			<i>Racine, Wis.</i>
John Charles Bradfield,	B.L.	5	<i>Grand Rapids.</i>
Mary Ellen Bradley,	A.B.	18	<i>Battle Creek.</i>
Ora Letta Bradley,	Ph.B.	3	<i>Battle Creek.</i>
Bert John Bradner,	B.L.	22	<i>Plymouth.</i>
John William Bradshaw,	A.B.	4	<i>Ann Arbor.</i>
Esther Braley,	A.B.	28	<i>Saginaw, West Side.</i>
Clarence Henry Brand,	B.S.	27	<i>Saginaw, West Side.</i>
Charles Daniel Brandriff,	Ph.B.	64	<i>Missouri Valley, Ia.</i>
Louise Marks Breitenbach,	Ph.B.	62	<i>Detroit.</i>
John Johnson Brewer,	A.B.		<i>Romeo.</i>
Mary Arvilla Brewer,	A.B.	25	<i>Romeo.</i>
Ima Gould Briggs,	Ph.B.	59	<i>Battle Creek.</i>
Stratton Duluth Brooks,	A.B.	92	<i>Mt. Pleasant.</i>
Laura Baker Broomall,			<i>Cheyney, Pa.</i>
Alice Brown,	A.B.	90	<i>Ann Arbor.</i>
Earl Mason Brown,	B.L.		<i>Battle Creek.</i>
Edward Thomas Brown,	Ph.B.	82	<i>Wolcott, N. Y.</i>
Gertrude Margaret Brown,	B.S.	11	<i>West Bay City.</i>
Herman Elisha Brown,	B.S. (Chem.)	101	<i>Kinderhook.</i>
James Lehi Brown,			<i>Pleasant Grove, Utah.</i>
Katherine Holland Brown,	B.L.	32	<i>Quincy, Ill.</i>
Mabel Maree Brown,	A.B.	4	<i>Port Huron.</i>
Nellie Brown,	B.S.		<i>West Bay City.</i>
Orie Elmore Brown,	Ph.B.	2	<i>Marquette.</i>
Sara Spencer Browne,	Ph.B.	72	<i>Ann Arbor.</i>
William McPherson Browning,	B.S.		<i>Howell.</i>
Myrtle May Bruner,	B.L.	90	<i>Wabash, Ind.</i>
Frank Egbert Bryant,	B.L.		<i>Grand Rapids.</i>
William Gordon Bryant,	A.B.	93	<i>Mt. Clemens.</i>
Julian Eugene Buchanan,			<i>Sterling, Col.</i>
Delia Edith Bullock,	Ph.B.	27	<i>Howell.</i>
Madge Genevieve Bunday,	Ph.B.	38	<i>St. Johns.</i>
Minnie Louise Bunker,	Ph.B.	6	<i>Muskegon.</i>
Emma Daisy Burke,	B.L.		<i>Ann Arbor.</i>
Ray Haddock Burrell,	B.S.	59	<i>Mancelona.</i>
Charles William Burrows,	A.B.	32	<i>Ann Arbor.</i>
Charles Ward Burton,	B.S.	19	<i>Detroit.</i>

Mary Agnes Burton,	Ph.B.	50	<i>Detroit.</i>
Douglas Burnett,			<i>Los Angeles, Cal.</i>
Harriet Edwina Bushnell,			<i>Detroit.</i>
John Edward Butler,	B.L.	30	<i>Ludington.</i>
Juliet Morton Butler,	B.S. (Bio.)	81	<i>Ann Arbor.</i>
May Morton Butler,	B.S.	59	<i>Ann Arbor.</i>
Orma Fitch Butler,	A.B.	57	<i>Ann Arbor.</i>
Frederick Magnus Butzel,	Ph.B.	54	<i>Detroit.</i>
Agnes Ophelia Cady,			<i>Ann Arbor.</i>
Guy Brewster Cady,	A.B.		<i>Detroit.</i>
Maude Elaine Caldwell,	Ph.B.	64	<i>Fremont, O.</i>
John McAuley Cameron,			<i>Lake Linden.</i>
Mary Frances Camp,	Ph.B.	86	<i>Ypsilanti.</i>
Albert Alexis Campbell,			<i>Leiter's Ford, Ind.</i>
Allan Campbell,	A.B.	19	<i>Detroit.</i>
Archibald Campbell,	Ph.B.	100	<i>Manhattan, Ill.</i>
Frederick Greene Candee,	B.S. (Chem.)		<i>Chicago, Ill.</i>
Roy Bishop Canfield,	A.B.	65	<i>Ann Arbor.</i>
Alva Babcock Caple,	B.S.		<i>Alma.</i>
Edward Francis Carey,	Ph.B.	31	<i>LaGrange, Ill.</i>
Elizabeth Mary Cargill,			<i>Grand Rapids.</i>
Margaret Sprague Carhart,	Ph.B.	2	<i>Ann Arbor.</i>
Francis Xavier Carmody,			<i>Waterliet.</i>
Martin Henry Carmody,			<i>Grand Rapids.</i>
Charles Knapp Carpenter,	Ph.B.	98	<i>Baileville, Ill.</i>
Frederick Vail Carpenter,			<i>Oberlin, O.</i>
Laura Augusta Carpenter,	A.B.	66	<i>Ann Arbor.</i>
Luther Clarendon Carpenter,	B.S.		<i>Bay City.</i>
Maud Annette Carpenter,			<i>Baileyville, Ill.</i>
William Ransom Carpenter,	Ph.B.	50	<i>Iron Mountain.</i>
Charles Ernest Cartier,	B.L.		<i>Ludington.</i>
Ada Malvina Cartwright,	B.S.	90	<i>Oregon, Ill.</i>
Charles Everett Cartwright,	Ph.B.	11	<i>Toledo, O.</i>
Grace Cartwright,	B.L.		<i>Oregon, Ill.</i>
Clara Lovina Case,	B.L.		<i>Ypsilanti.</i>
Edward Burns Caulkins,	B.L.	23	<i>Detroit.</i>
Edith Tryon Chamberlain,			<i>Elkhart, Ind.</i>
Edmund Claude Champion,	B.S. (Chem.)	11	<i>Three Rivers.</i>
Alice Chandler,			<i>Chicago, Ill.</i>
Artena Mary Chapin,	A.B.	85	<i>Fort Wayne, Ind.</i>
Homer Coolidge Chapin,	A.B.		<i>Niles.</i>
Lizzie Grace Charlton,			<i>Louisville, Ky.</i>
Tai Yin Cheo,			<i>Kiukiang, China.</i>

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Elaine Childs,	B.L.	102	<i>Washington, D. C.</i>
Lelia Merilla Childs,	B.S.	25	<i>Ann Arbor.</i>
Charles Frisbie Chubb,	Ph.B.	60	<i>Coldwater.</i>
Francis LeGrande Church,	B.S.	45	<i>Holly.</i>
Clarence Day Clark,	Ph.B.	90	<i>Northville.</i>
Fanny Emmaline Clark,			<i>Ovid.</i>
Martha Canfield Clark,	B.L.	13	<i>Ann Arbor.</i>
Elizabeth Cleveland,	A.B.	54	<i>Detroit.</i>
Ernest Cleverdon,	B.L.		<i>Austin, Ill.</i>
Julia Blanche Clifford,			<i>Minneapolis, Minn.</i>
Carolyn Belle Cline,	B.S.	17	<i>West Branch.</i>
George Frank Clukey,	B.L.	45	<i>Mt. Clemens.</i>
Jennie Weaver Clute,			<i>Montezuma, Ia.</i>
Benjamin Clark Cocker,	Ph.B.	25	<i>Adrian.</i>
Estella Cockrell,			<i>Kane, Ill.</i>
Martha Officer Coffin,			<i>Ann Arbor.</i>
Bessie Maud Colby,	B.L.	87	<i>Adamsville.</i>
Harry Arthur Cole,	B.L.	80	<i>Hinsdale, Ill.</i>
Lillian Felch Cole,	Ph.B.	7	<i>Ann Arbor.</i>
Oscar Phipps Cole,	A.B.	100	<i>Berlin, N. H.</i>
Rufus Ivory Cole,	B.S.	104	<i>Peru, Ill.</i>
Frederick William Backus			
Coleman,	A.B.	100	<i>Detroit.</i>
Grace Louise Collins,	Ph.B.	99	<i>Peotone, Ill.</i>
William Alfred Comstock,	Ph.B.		<i>Alpena.</i>
Edwin Warren Conable,	B.L.		<i>Independence, Ia.</i>
Frank Coolbaugh Condon,			<i>Ann Arbor.</i>
Ruie Ann Connor,	Ph.B.		<i>Ann Arbor.</i>
Charlotta Conover,			<i>Flint.</i>
Charles Goldsmith Cook,	A.B.	96	<i>Detroit.</i>
Frances Clare Cook,	B.L.	73	<i>Corunna.</i>
Anna Elizabeth Cool,	Ph.B.	92	<i>Decatur, Ill.</i>
Edgar Louis Cooley,	Ph.B.		<i>Lansing.</i>
Fannie Cooley,			<i>Lansing.</i>
Mary Beatrice Cooley,			<i>Ann Arbor.</i>
Maud Irene Cooley,	A.B.	96	<i>Canandaigua, N. Y.</i>
Clarence Argyle Coolidge,	Ph.B.	90	<i>Niles.</i>
Lelia May Coolidge,			<i>Winnebago, Ill.</i>
Byron Henry Coon,	Ph.B.	57	<i>Ann Arbor.</i>
Carl Herbert Cooper, A.B.,			
<i>Upper Iowa University,</i>			<i>Quasqueton, Ia.</i>
Hobart Corwin,	Ph.B.		<i>Pontiac.</i>
George William Cottrell,	B.S.	24	<i>Detroit.</i>

Paul A. Cowgill,	B.S.	57	<i>Cassopolis.</i>
Rose McGill Cranston,			<i>Constantine.</i>
Fred Crary,			<i>Read, Ia.</i>
Adriel Alanson Crawford,	Ph.B.	30	<i>Owosso.</i>
John Robert Crouse,	A.B.	52	<i>Fostoria, O.</i>
Jenny English Crozier,	B.S. (Bio.)	4	<i>Ann Arbor.</i>
Nanna Cora Crozier,	B.L.		<i>Ann Arbor.</i>
Robert Smith Cummings,	B.L.	20	<i>Toledo, O.</i>
Walter Galpin Curtis,	B.S.	28	<i>Salem.</i>
Karl Gustave Dahlstrom,	B.L.	65	<i>Ishpeming.</i>
Arthur Dalley,			<i>Summit, Utah.</i>
Effie Danforth,	Ph.B.	71	<i>Ann Arbor.</i>
Horace Warren Danforth,	B.L.	64	<i>Denver, Col.</i>
Robert Southgate Danforth,	A.B.	16	<i>Ann Arbor.</i>
Josephine Daniels,	A.B.	24	<i>Gregory.</i>
Rich Howard Daniels,	Ph.B.		<i>Owosso.</i>
Albertus Darnell,	Ph.B.	37	<i>Hinckley, Ill.</i>
Amaziah Donald Davis,	A.B.	92	<i>Grand Rapids.</i>
Charles Bartlett Davis,	A.B.	30	<i>Detroit.</i>
Charles Pugh Davis,	B.L.	87	<i>Lewis, Ia.</i>
Edwin Alfred Davis,	A.B.		<i>Chicago, Ill.</i>
Levi Orville Davis,			<i>Macomb.</i>
Edna Daisy Day,	B.S. (Bio.)	96	<i>Plainfield, N. J.</i>
Robert Louis Dean,	B.L.	70	<i>Hinsdale, Ill.</i>
Walter Minturn Dean,	B.L.	23	<i>Chicago, Ill.</i>
Edward Harris Decker,	A.B.	59	<i>Battle Creek.</i>
William Bellows Decker,	A.B.	86	<i>Battle Creek.</i>
Charles Fisher Delbridge,	B.S.		<i>Detroit.</i>
Rose Demmon,	A.B.	88	<i>Ann Arbor.</i>
Edward Paul de Pont,			<i>Ann Arbor.</i>
Robert Edmond Lee DeRan,			<i>Old Fort, O.</i>
Mary Elise DeVeny,	B.L.	25	<i>Chicago, Ill.</i>
Julian George Dickinson,	Ph.B.	32	<i>Detroit.</i>
Lula J. Dickinson,	B.S.		<i>Gregory.</i>
Frank Diehl,	Ph.B.		<i>Holt.</i>
Raymond William Dikeman,	B.S.	2	<i>Three Rivers.</i>
Florence Gertrude Dillon,			<i>Detroit.</i>
Charlotte Dilworth,			<i>Bozeman, Mon.</i>
Martha Dilworth,	Ph.B.		<i>Bozeman, Mon.</i>
Fred Leslie Divine,	B.L.	30	<i>Sycamore, Ill.</i>
Gertrude Adelaide Divine,	B.L.	88	<i>Ann Arbor.</i>
James Joseph Divine,			<i>Ann Arbor.</i>
Mira Lloyd Dock,			<i>Harrisburg, Pa.</i>

Louise Frances Dodge,	Ph.B.		<i>Adrian.</i>
Laura Dolese,	B.S.	10	<i>Chicago, Ill.</i>
Louise Hart Dolly,			<i>Albion, N. Y.</i>
Julia Donlan,	Ph.B.	5	<i>Ann Arbor.</i>
Alice Mabel Donnelly,	A.B.		<i>Grand Rapids.</i>
Albert Wilford Dorr,			<i>Manchester.</i>
Nina May Doty,	Ph.B.	109	<i>Ann Arbor.</i>
Helen Louise Douglas,	Ph.B.	91	<i>Ann Arbor.</i>
Charles Jacob Dovel,	Ph.B.	32	<i>Manistee.</i>
Sam Hanson Dowden,	Ph.B.	60	<i>Greensburg, Ind.</i>
John Hathaway Dressel,	B.L.		<i>Kane, Ill.</i>
Lawrence Latourette Driggs,			<i>Portland, Ore.</i>
Helen Eliza Dryer,	A.B.	97	<i>Fort Wayne, Ind.</i>
Irene Ann Duffy,	B.L.		<i>Ann Arbor.</i>
Elizabeth Anne Dugdale,			<i>Goshen, Ind.</i>
Anna Stuart Duncan,	B.L.	76	<i>Au Sable.</i>
Helen Dunham,	Ph.B.	20	<i>West Bay City.</i>
Florence May Durand,	A.B.	17	<i>Ann Arbor.</i>
Ida Mae Durkee,			<i>Pontiac.</i>
Allen Jay Easton,			<i>Hudson, N. Y.</i>
Elizabeth Anna Eberle,	A.B.	60	<i>South Bend, Ind.</i>
Edith Mabel Edwards,	Ph.B.		<i>Fremont.</i>
Gertrude Agnes Edwards,	Ph.B.		<i>Adrian.</i>
John Henry Ehlers,			<i>Dayton, O.</i>
Sheridan Williams Ehrman,	B.L.	94	<i>Decatur, Ill.</i>
William Allen Hall Ely,	A.B.		<i>Tarrytown, N. Y.</i>
William Henry Emery,	B.L.	30	<i>Elmhurst, Ill.</i>
Harold Hunter Emmons,	A.B.	64	<i>Ann Arbor.</i>
Franklin Alexander Emrick,	B.L.		<i>Ann Arbor.</i>
Frederick Engelhard,	A.B.	37	<i>Ann Arbor.</i>
Mary Louise Engelhard,			<i>Ann Arbor.</i>
Frank Seymour Enos,			<i>Grand Rapids.</i>
Matilda Louise Fairman,	Ph.B.	89	<i>Chicago, Ill.</i>
Charles Albert Farnam,	A.B.	84	<i>Sand Lake.</i>
Tertia Amelia Farnsworth,	Ph.B.	57	<i>Ann Arbor.</i>
Ralph Farnum,	A.B.	30	<i>Ann Arbor.</i>
Charles Henry Farrell,	B.S.	26	<i>Dexter.</i>
George Edwards Fay,	B.S.	4	<i>Chicago, Ill.</i>
Fannie Jessie Felver,	Ph.B.	28	<i>Batavia, Ill.</i>
Charles Albert Fennell,	B.L.	52	<i>Kansas City, Mo.</i>
Gustave Herman Ferbert,	Ph.B.	57	<i>Cleveland, O.</i>
Oceana Ferrey,	Ph.B.	61	<i>Lansing.</i>
Jane Estelle Field,	A.B.	96	<i>Kalamazoo.</i>

Rebecca Elizabeth Finch,	A.B.	32	Stanton.
Ida May Finley,	B.S.	12	Battle Creek.
Adelbert Howard Finney,	Ph.B.	77	Cleveland, O.
Bertha May Fish,	Ph.B.	58	Thornton.
Dora Clementine Fisher,	Ph.B.	52	Ann Arbor.
Orleana Amanda Fisher,	B.L.	106	Abilene, Kan.
Grace Sarah Flagg,	A.B.	22	Ann Arbor.
†Louis Jesse Fletcher,	B.L.		Sugar Grove, Ill.
James Harmon Flinn,	B.L.	77	Detroit.
Emilie Agnes Flintermann,	Ph.B.	22	Detroit.
Victoria Fohey,	B.L.		Webster.
Benton Walter Forkner,			Anderson, Ind.
Rose Hibbitt Forman,			New Albany, Ind.
Helen Daisy Fortaine,	B.S.		Decatur.
Wille Alvin Forward,	Ph.B.		Niles.
Frances Alma Foster,	B.L.	70	Detroit.
Homer Redfield Foster,	A.B.	63	Benton Harbor.
Walter Eugene Foster,	A.B.	27	Elgin, Ill.
Leah Isabel Fowler,	B.L.	91	St. Johns.
Estelle Helen Fox,			Hinsdale, Ill.
James Joseph Franc,	Ph.B.	105	Toledo, O.
Colman Dudley Frank,	Ph.B.	65	Toledo, O.
George Ernest Frazer,	A.B.	61	Monroe.
Marian Frazer,	B.S.	27	Monroe.
Elmer Leslie Freeman,	A.B.		Detroit.
James Leslie French,	A.B.		Grand Rapids.
Arthur Emery Fretageot,			New Harmony, Ind.
Isadore Freud,	B.L.		Detroit.
Jacob Lincoln Freud,	B.L.	37	Detroit.
Carrie Ella Freudenthal,	Ph.B.	12	Chicago, Ill.
Mabel Gertrude Frost,	B.S.	6	Chicago, Ill.
Donald Fuller,			Detroit.
Frank Everett Furst,	B.L.	19	Freeport, Ill.
Eliza Ellen Fyan,	A.B.	42	Port Huron.
Stuart Eugene Galbraith,	B.L.	98	Pontiac.
Minnie Julia Gardner,	B.L.	41	Ann Arbor.
Gwynn Garnett, Jr.,	B.L.	2	Chicago, Ill.
Christian Frederick Gauss,	A.B.	26	Ann Arbor.
Edward Francis Gee,	Ph.B.	56	Ypsilanti.
Conrad Georg,	A.B.	107	Ann Arbor.
Julia Emma Gettemy,			Moline, Ill.
George Eliot Getz,	Ph.B.		Marquette.
Jessie Bertha Gibbs,	B.L.	88	Ann Arbor.

Marjory Gibson,			<i>St. Clair.</i>
Frederick Theodore Gies,	A.B.	20	<i>Detroit.</i>
Faith Holt Gilbert,	Ph.B.	80	<i>Detroit.</i>
Fenton Lewis Gilbert,	B.L.		<i>Gibsonburg, O.</i>
Neil Alexander Gilchrist,	A.B.	88	<i>Ishpeming.</i>
William Albert Gilchrist,	B.L.		<i>Alpena.</i>
Gaylord Wilson Gillis,	B.L.	99	<i>Detroit.</i>
Helen Marion Gillis,			<i>Anoka, Minn.</i>
William Henry Gleysteen,	A.B.	20	<i>Alton, Ia.</i>
Carlotta Goldstone,	A.B.	100	<i>Saginaw, East Side.</i>
Harry Leith Goodbread,	B.L.	66	<i>Nevada, O.</i>
Luman Webster Goodenough,	B.L.	103	<i>Ludington.</i>
Grace Fanny Goodman,	Ph.B.	48	<i>Westport, Mo.</i>
Herbert Charles Gore,	B.S. (Chem.)		<i>Chicago, Ill.</i>
Clarence Samuel Gorsline,	B.L.	9	<i>Battle Creek.</i>
Alice Mary Graham,	A.B.	37	<i>Saginaw, West Side.</i>
Edward Proctor Graves,			<i>Kansas City, Mo.</i>
Porter Graves,	B.L.	57	<i>Kansas City, Mo.</i>
Thomas Starr Gray,			<i>Oakdale, Cal.</i>
Carl Munson Green,	B.S.		<i>Charlotte.</i>
Charles Coy Green,	B.S.	24	<i>Battle Creek.</i>
Martha Greiner,			<i>Lisbon.</i>
Robert Grinnell,	B.L.	8	<i>Chicago, Ill.</i>
Harold Thomas Griswold,	B.S.		<i>Chicago, Ill.</i>
Theresa Alvina Grube,	B.L.	95	<i>Ann Arbor.</i>
William Backus Guitteau,	B.L.	58	<i>Toledo, O.</i>
William Henry Hadley,			<i>Ann Arbor.</i>
Walter David Hadzsits,	A.B.	48	<i>Detroit.</i>
Walter Charles Haight,	B.L.	96	<i>Sycamore, Ill.</i>
Harry Lawrence Hall, M.D.,			<i>Ann Arbor.</i>
Florence Mabelle Halleck,	Ph.B.	94	<i>Ann Arbor.</i>
Burt David Hammond,	B.L.		<i>Saline.</i>
Edward King Hampton,	B.L.		<i>Decatur, Ill.</i>
Clarence Robert Hanes,	Ph.B.	22	<i>Schoolcraft.</i>
Virginia Elisabeth Hance,			<i>Hannibal, Mo.</i>
James Hannan, Jr.,	Ph.B.		<i>Chicago, Ill.</i>
Otto Henry Hans,	Ph.B.	32	<i>South Bend, Ind.</i>
Hanna Hansen,	B.L.	20	<i>Elgin, Ill.</i>
Carrie Adelaide Hardy,	B.S.	100	<i>Ypsilanti.</i>
Roy Mitchell Hardy,	A.B.	38	<i>Waterloo, Ill.</i>
Edith Harkness,	A.B.		<i>Philadelphia, Pa.</i>
Harriet Ellen Harlan,	A.B.	28	<i>Grand Rapids.</i>
Emily Augustine Harper,	Ph.B.	87	<i>Detroit.</i>

Ernest Frederick Harrington,	B.L.		<i>Port Huron.</i>
Jerome Benjamin Harrington,	B.L.		<i>Watseka, Ill.</i>
Matilda Agnes Harrington,	B.S.		<i>Dubuque, Ia.</i>
Anna Louisa Harris,	Ph.B.		<i>Ann Arbor.</i>
Elizabeth Ann Harris,	B.L.	28	<i>Vernon.</i>
George DeWitt Harris,	Ph.B.	20	<i>Franklin, Ky.</i>
Hugh Henry Harris,	A.B.		<i>Greenville.</i>
John Wistar Harris,	B.S.	25	<i>Ann Arbor.</i>
Julian Hartwell Harris,	A.B.	30	<i>Detroit.</i>
William Benson Harrison,	B.S.	12	<i>Imlay City.</i>
Frederic Harry,	B.L.	8	<i>Hancock.</i>
Edwin Brett Hart,	B.S., (Chem.)	89	<i>Sandusky, O.</i>
Jennie May Harvey,	B.L.	83	<i>Anamosa, Ia.</i>
Henry French Hawkins,	B.S.	29	<i>Elgin, Ill.</i>
Merritt Mattison Hawxhurst,	A.B.	26	<i>Detroit.</i>
Ione Haydon,	B.L.	24	<i>Decatur.</i>
Albert Leslie Hayes,			<i>Galva, Ill.</i>
Leslie Grant Hayes,	A.B.	84	<i>Ann Arbor.</i>
Nellie Myra Hayes,	B.L.	80	<i>Grand Rapids.</i>
Henry Thomas Heald,	Ph.B.	26	<i>Grand Rapids.</i>
Kate Healy,	Ph.B.	16	<i>Fort Dodge, Ia.</i>
Irma Anne Heath,			<i>Grand Rapids.</i>
Terry Kimball Heath,	B.L.		<i>Grand Rapids.</i>
Dorcas Hedden,			<i>Charlton, N. Y.</i>
Earl Raye Hedrick,	A.B.	95	<i>Ann Arbor.</i>
Fred Heffelbower,	A.B.	64	<i>Ann Arbor.</i>
Annie Hegeler,	B.L.	48	<i>La Salle, Ill.</i>
Zuleikha Hegeler,	B.L.	12	<i>La Salle, Ill.</i>
Harry Helfman,	A.B.	42	<i>Detroit.</i>
Joanna King Hempsted,	B.L.	97	<i>Detroit.</i>
Grace Asenath Hendrickson,			<i>Ann Arbor.</i>
George David Kerr Hendry,	B.S.	43	<i>Ann Arbor.</i>
Thomas Bravais Henry,			<i>Independence, Kan.</i>
Irving Herr,	Ph.B.		<i>Oak Park, Ill.</i>
Walter Dwight Herrick,	A.B.	32	<i>Oak Park, Ill.</i>
Henry William Hess,	B.S.	32	<i>Toledo, O.</i>
William Hugh Hess,	B.S.	32	<i>Woodstock.</i>
Alice Jovita Hickey,	B.L.		<i>Michigamme.</i>
Turner Paul Hickey,	A.B.	94	<i>Lansing.</i>
Annie Louise Hill,	A.B.	53	<i>Detroit.</i>
Cary LeRoy Hill,	Ph.B.		<i>Chelsea.</i>
Eva Jane Hill,	A.B.	39	<i>Chicago, Ill.</i>
Isadore Leon Hill,	A.B.	73	<i>Detroit.</i>

Anna Blanch Hills,			<i>Ann Arbor.</i>
Percy Albert Himes,	B.L.		<i>Grand Rapids.</i>
Mathilde Hine,	Ph.B.	79	<i>Bay City.</i>
Alice Hoadley,			<i>Streator, Ill.</i>
Emilia Hochstein,	A.B.	11	<i>Kalamazoo.</i>
Julia Mott Hodge,	Ph.B.	66	<i>Auburn, Ind.</i>
Malvina Victoria Hodgman,			<i>Princeton, Ill.</i>
Clayton Hoffman,	B.L.		<i>Allegan.</i>
Edna Marie Holbrook,	B.L.	77	<i>Ann Arbor.</i>
Charles Benjamin Hole,	B.L.		<i>Chicago, Ill.</i>
Lemuel Homer Hole,			<i>Chicago, Ill.</i>
Abram James Holland,			<i>Detroit.</i>
Edward Morton Holland,	A.B.	102	<i>Detroit.</i>
Howard H. Holland,	B.S.		<i>Saginaw, East Side.</i>
Walter Herbert Holsinger,	Ph.B.		<i>Kendallville, Ind.</i>
Leonard Counsellor Honesty,	A.B.		<i>Memphis, Tenn.</i>
James H. Hooper,			<i>Butte, Mon.</i>
Agnes Hopkins,			<i>Bear Lake.</i>
Dorsey Reno Hoppe,	B.L.	24	<i>Chelsea.</i>
Margaretha Elise Catherine Horn, B.S., <i>Kansas State</i>			
<i>Agricultural College,</i>	B.S. (Bio.)	84	<i>Manhattan, Kan.</i>
Harry Newell Hosick,	B.S.		<i>Chicago, Ill.</i>
Royal Barnhart Hovey,	B.S.	26	<i>Independence, Ia.</i>
Berton James Howard,	B.S.	54	<i>Ionia.</i>
Anna Wilmarth Howe,			<i>Worcester, Mass.</i>
Nina Mae Howlett,	Ph.B.		<i>Ann Arbor.</i>
Euretta Amelia Hoyles,	A.B.	90	<i>Aurora, Ill.</i>
Hobart Birney Hoyt,	A.B.	107	<i>Grand Rapids.</i>
Abigail Hubbard,	Ph.B.	56	<i>Ashtabula, O.</i>
Leonidas Hubbard, Jr.,			<i>Waldron.</i>
Winifred Hubbell,	Ph.B.	1	<i>Saginaw, West Side.</i>
Arthur Scott Hudson,	A.B.	33	<i>Alpena.</i>
Mary Helen Stewart Hudson,	B.S.		<i>Ann Arbor.</i>
Martin Charles Huggett,	A.B.		<i>Charlotte.</i>
William Ward Hughes,			<i>Oak Park, Ill.</i>
Charles Parkyn Hulce, A.B., <i>Hillsdale College,</i>	A.B.		<i>Hillsdale.</i>
Harriett Hull,	Ph.B.	30	<i>Lansing.</i>
William Clark Hull,			<i>Ann Arbor.</i>
Edwin Haynes Humphrey,	B.L.	64	<i>Detroit.</i>
Marion Hunter,	B.L.	86	<i>Ann Arbor.</i>
DeWitt Clinton Huntoon,	B.L.	54	<i>Waterford.</i>

Harry Rogers Hurlbut,	A.B.	4	<i>Chicago, Ill.</i>
Amelia Agnes Huss,	B.L.	45	<i>Ann Arbor.</i>
Elsie Maud Hutchison,			<i>Sioux Falls, S. Dak.</i>
Arthur Mastick Hyde,	A.B.		<i>Princeton, Mo.</i>
Fritz Carleton Hyde,	B.S. (Bio.)	30	<i>Grand Rapids.</i>
Robert Edward Hyde,	Ph.B.	6	<i>Goshen, Ind.</i>
Robert Wilson Hyde,	A.B.	58	<i>Tekonsha.</i>
Anita Adella Ibershoff,			<i>Saginaw, East Side</i>
Carl Henry Ibershoff,	B.S.	40	<i>Saginaw, East Side.</i>
Elizabeth Irland,	Ph.B.	96	<i>Ann Arbor.</i>
Helen Amelia Irland,	Ph.B.	35	<i>Ann Arbor.</i>
Walter Newton Isbell,	B.S.		<i>Saline.</i>
Cecil McKee Jack,	Ph.B.		<i>Decatur, Ill.</i>
Harrison Clarke Jackson,	B.L.	64	<i>Chicago, Ill.</i>
Lambert Lincoln Jackson,	A.B.	75	<i>Ypsilanti.</i>
May Selma Jachnig,	B.S.		<i>Hancock.</i>
Edward Hamner Jamieson,	A.B.	4	<i>Kendallville, Ind.</i>
Will Edward Janes,	B.S.	33	<i>Saginaw, East Side.</i>
Harriet Edith Jenkinson,	Ph.B.	50	<i>Chicago, Ill.</i>
Edyth May Jenney,			<i>Ann Arbor.</i>
George Darwin Jennings,	B.L.	85	<i>Tonica, Ill.</i>
Grace Wheeler Jennings,	A.B.	63	<i>Toledo, O.</i>
Ogden Jewell,	A.B.	93	<i>Detroit.</i>
Ada Matilda Johnson,	Ph.B.		<i>Decatur, Ill.</i>
Burton Branch Johnson,	A.B.	32	<i>Owosso.</i>
Fred Joseph Johnson,	B.L.	29	<i>Mundy.</i>
John McLain Johnson, Jr.,			<i>Hopkinton, Ia.</i>
Samuel James Johnson,			<i>Hopkinton, Ia.</i>
Edith Clemence Jones,	B.L.	86	<i>Ann Arbor.</i>
Orville Kiger Jones,	B.L.		<i>Connersville, Ind.</i>
Percy Wall Jones,			<i>Dowagiac.</i>
Matthew Joyce,			<i>Fort Dodge, Ia.</i>
Clyde Watkins Jump,	Ph.B.		<i>Plainfield, Ill.</i>
Minnie Kaapke,			<i>Melrose Park, Ill.</i>
Demeter Kalenoff,	B.S.	30	<i>Ann Arbor.</i>
Minnie Lillian Kautsky,	A.B.	24	<i>Indianapolis, Ind.</i>
William Peter Kavanagh,	B.L.	50	<i>Denver, Col.</i>
Lillian Alma Keating,	Ph.B.		<i>Helena, Mon.</i>
Christine Keck,			<i>Grand Rapids.</i>
Louis Ward Keeler,	Ph.B.		<i>Mt. Clemens.</i>
Albert Henry Keith,	B.L.	8	<i>Chicago, Ill.</i>
Jessie Keith,			<i>Edwardsport, Ind.</i>
Helen Adeline Kelley,	Ph.B.	96	<i>Cadillac.</i>

Nell Kempf,	Ph.B.	104	<i>Ann Arbor.</i>
Ellen Ann Kennan,	A.B.	104	<i>Modesto, Cal.</i>
Thomas Kennan,			<i>Milwaukee, Wis.</i>
Charlotte Elizabeth Kennedy, B.L.		51	<i>Au Sable.</i>
Gertrude Blanche Kennedy, B.L.			<i>Au Sable.</i>
Agnes Monica Kenny,	B.L.	82	<i>Manistee.</i>
Emma Matilda Kesting,	B.S.	28	<i>Kansas City, Mo.</i>
Wilbur Kettlestrings,	B.L.	29	<i>Chicago, Ill.</i>
Edward L. Kilbourn,	B.L.		<i>Ann Arbor.</i>
Edith May Kimball,	Ph.B.	104	<i>Ann Arbor.</i>
Annie Dorcas Kimlin,	A.B.	60	<i>Quincy, Ill.</i>
Helen Louise Kimlin,	A.B.		<i>Quincy, Ill.</i>
Linus Edwin Kimmel,			<i>Kendallville, Ind.</i>
Calvin Putman King,	B.S.		<i>Havana, Ill.</i>
William Arnold Kirchberger, B.L.		12	<i>Chicago, Ill.</i>
Annie Sales Kirtland,	B.L.	91	<i>Gregory.</i>
James Ellsworth Kirtland,	B.L.	76	<i>Gregory.</i>
Horace Kitchel,	B.L.	8	<i>Coldwater.</i>
Macy Kitchen,	A.B.	46	<i>Saginaw, East Side.</i>
Ida Elizabeth Kittredge,	Ph.B.		<i>Ann Arbor</i>
Byron Harry Knapp,	B.L.		<i>Owosso.</i>
Rudolf Ernst Knapp,	B.S.	49	<i>Evansville, Ind.</i>
Thad Johnson Knapp,	Ph.B.	29	<i>Northville.</i>
Stuart Edwin Knappen,	A.B.	32	<i>Grand Rapids.</i>
Reinhold Knauth,	A.B.	100	<i>Detroit.</i>
Gracia Knight,	Ph.B.	71	<i>Utica.</i>
Annie Knisely,	B.S.	46	<i>Benton Harbor.</i>
Marguerite Knowlton,	A.B.		<i>Ann Arbor.</i>
Harry Reuben Kohn,	B.L.	83	<i>New York, N. Y.</i>
Louis Alvin Kreis,	B.L.	24	<i>Cincinnati, O.</i>
Bell Krolik,	Ph.B.	61	<i>Detroit.</i>
Joseph Nelson Krolik,	Ph.B.		<i>Detroit.</i>
Henry William Kurz,	A.B.	54	<i>Monroe.</i>
Grace Lamb,	B.L.	60	<i>Erie, Pa.</i>
Evangeline Lodge Land,	B.S. (Chem.)	16	<i>Detroit.</i>
Elmer Bloomfield Lane,	A.B.	64	<i>Fort Wayne, Ind.</i>
Fanny Elizabeth Langdon,	B.S. (Bio.)	113	<i>Plymouth, N. H.</i>
Alexander Hector Langell,	B.L.		<i>St. Clair.</i>
Robert Young Larned,	Ph.B.	24	<i>Lansing.</i>
Eugene LaRowe,	A.B.	100	<i>Webberville.</i>
Bessie Barber Larrabee,	A.B.	95	<i>McGregor, Ia.</i>
John Stuart Lathers,	B.L.	50	<i>Inkster.</i>
Kirke Lathrop,	B.L.	78	<i>Detroit.</i>

Hugh Law,	A.B.	3	<i>Flint.</i>
Katharine Harriet Law,	Ph.B.	11	<i>Flint.</i>
John Edward Lawless,	B.L.	27	<i>Des Moines, Ia.</i>
Erie Maude Layton,	A.B.	29	<i>Bay City.</i>
Fred Augustus Leas,			<i>Ann Arbor.</i>
Thad Emory Leland,			<i>Emery.</i>
Lilabel Adda Lemon,	Ph.B.		<i>Ann Arbor.</i>
Mary Eleanor Lennon,	B.L.	8	<i>Flint.</i>
Clare James LeRoy,	Ph.B.	97	<i>Ann Arbor.</i>
James Alfred LeRoy,	A.B.	86	<i>Ann Arbor.</i>
Max Levitt,	A.B.	62	<i>Grand Rapids.</i>
Moses Montefiore Levy,			<i>Quincy, Ill.</i>
Eula Jennie Waters Lewis,	A.B.	67	<i>Chicago, Ill.</i>
William Adams Lewis,	B.S.	84	<i>Rockford, Ill.</i>
Frances Crane Lillie, M. D.,			
<i>Northwestern Medical</i>			
<i>College.</i>			<i>Ann Arbor.</i>
Flora Ralston Linn,	Ph.B.		<i>Detroit.</i>
Ellen Hart Littlefield,	Ph.B.		<i>Detroit.</i>
Burton Edward Livingston,	B.S. (Bio.)	42	<i>Grand Rapids.</i>
Dale Livingstone,	A.B.	99	<i>Detroit.</i>
Eva May Locke,	A.B.		<i>Nashua, N. H.</i>
Mabel Gertrude Loder,	B.S.	22	<i>Lansing.</i>
Sigmund Edward Loeb,	A.B.	20	<i>Chicago, Ill.</i>
Harry Wadsworth Long,	B.L.		<i>Menominee.</i>
Frederic Morris Loomis,	A.B.	32	<i>Grand Rapids.</i>
Carrie Lord,			<i>Grass Lake.</i>
Charles Olney Loucks,	A.B.	44	<i>Chicago, Ill.</i>
Harry Kimball Loud,	A.B.	47	<i>Au Sable.</i>
Medor Ewing Louisell,	B.L.	105	<i>Eastlake.</i>
George Bruckner Lowrie,	B.S.	31	<i>Detroit.</i>
James Leo Lynch,			<i>Wiscoy, Minn.</i>
Alva Eden Lyon,			<i>Ann Arbor.</i>
Margaret MacGregor,	Ph.B.	96	<i>Bay City.</i>
Florence Ewing MacIntyre,	B.L.	37	<i>Knoxville, Tenn.</i>
Jessie Marion Mack,	Ph.B.		<i>Ann Arbor.</i>
William Lyman Mack,	A.B.		<i>Ann Arbor.</i>
Otis Hardy Maclay,	B.S.	69	<i>Joliet, Ill.</i>
Emma Josephine MacMorran,	Ph.B.	111	<i>Port Huron.</i>
Agnes MacNaughton,	B.L.	7	<i>Ann Arbor.</i>
Elizabeth MacNeil,			<i>Pontiac.</i>
Mary MacNeil,			<i>Grand Rapids.</i>
Lester Elmer Maher,	B.L.	45	<i>Chicago, Ill.</i>

256 *Department of Literature, Science, and the Arts.*

Effie Clare Mann,	B.L.		<i>Elgin, Ill.</i>
Charles Albert Manning,	B.L.	89	<i>Michigan City, Ind.</i>
Alice Cary Manwarren,	B.S.		<i>Ann Arbor.</i>
André George Marion,	A.B.		<i>Elgin, Ill.</i>
Herman Cornelius Markham,			<i>Ann Arbor.</i>
Helena Marquardt,	B.L.	37	<i>Mt. Clemens.</i>
Alva Agar Marshall,	B.L.		<i>Chicago, Ill.</i>
Mary Estelle Marshall,	Ph.B.	4	<i>Chicago, Ill.</i>
William Marshall,	B.S.	56	<i>Ypsilanti.</i>
Cora Oliver Martin,	B.L.		<i>Decatur, Ill.</i>
Edward Hiram Storms Martin,	Ph.B.	63	<i>Chicago, Ill.</i>
Lida Chenoweth Martin,	B.L.		<i>Decatur, Ill.</i>
Agnes May Mason,	Ph.B.	102	<i>Streator, Ill.</i>
Edith Roy Mason,			<i>Elgin, Ill.</i>
Margaret Delia Mason,	B.L.	8	<i>Muskegon.</i>
Ralph Clark Mason,	B.L.	56	<i>Ann Arbor.</i>
Stanley Matthews,	B.L.	62	<i>Escanaba.</i>
Carl Emil McAlvay,	Ph.B.	32	<i>Manistee.</i>
Lewis Wilson McCandless,	A.B.	34	<i>Prescott, Ariz.</i>
John Hancock McClellan,	A.B.	76	<i>Lexington, Ky.</i>
Ray James McColl,			<i>Delhi Mills.</i>
Agnes McCotter,	B.S.		<i>Pontiac.</i>
Leila McCotter,	B.S.		<i>Pontiac.</i>
Herbert Jay McCreary,			<i>Erie, Pa.</i>
John Brower McCreery,			<i>Detroit.</i>
Pearl McDonald,	A.B.	34	<i>Ann Arbor.</i>
Katie Elizabeth McFadzean,	Ph.B.	58	<i>Port Huron.</i>
Beulah Margarete McGregor,			<i>Ann Arbor.</i>
James Galbraith McHenry,	Ph.B.	29	<i>Lansing.</i>
Norman King McInnis,	A.B.	24	<i>Saginaw, East Side.</i>
Nellie McKay,	Ph.B.	10	<i>Caro.</i>
Robert Cameron McKay,	B.L.		<i>Caro.</i>
James McKee,	A.B.	26	<i>Laingsburg.</i>
Susan Laura McKee,	A.B.	61	<i>Morrice.</i>
William Dexter McKenzie,	A.B.	93	<i>Ann Arbor.</i>
Harriett Elvira McKinstry,	A.B.	100	<i>Cleveland, O.</i>
Anna Thorne McLauchlan,	A.B.	52	<i>Chicago, Ill.</i>
Samuel Kenneth McLeod,	B.L.	3	<i>Detroit.</i>
Lois Azubah McMahon,	Ph.B.	124	<i>Ypsilanti.</i>
Robert Parker McMaster,	Ph.B.	32	<i>Dowagiac.</i>
Archie Harold McMillan,	A.B.	8	<i>Bay City.</i>
Grace Ellen McNoah,	Ph.C., B.L.	79	<i>Ann Arbor.</i>
Anna Belle McOmber,	A.B.		<i>Ann Arbor.</i>

George Franklin Mead,	Ph.B.	32	<i>Detroit.</i>
James Leonard Mee,	B.S. (Chem.)	22	<i>Ann Arbor.</i>
Fanny Harvey Merrill,			<i>Bay City.</i>
William Maurice Mertz,	Ph.B.	96	<i>Burnett's Creek, Ind.</i>
Benjamin Bradford Metheany,	Ph.B.		<i>Grand Rapids.</i>
Anna May Miller,			<i>Dayton, O.</i>
Armand Rudolph Miller,	B.S. (Chem.)	67	<i>Kansas City, Mo.</i>
Byron B. Miller,			<i>South Bend, Ind.</i>
Frances Winifred Miller,	B.L.		<i>Kenosha, Wis.</i>
Guy Alonzo Miller,	A.B.	28	<i>Detroit.</i>
Louallen Fred Miller,	Ph.B.		<i>Aurora, Ill.</i>
Norman J. Miller,	B.S. (Bio.)	72	<i>Waterloo, Ia.</i>
Genevieve Elizabeth Mills,	A.B.	28	<i>Ann Arbor.</i>
Georgien Emma Mogford,	A.B.	96	<i>Jackson.</i>
William August Mogk,	A.B.	74	<i>Ann Arbor.</i>
Jessie Barney Monroe,			<i>Flint.</i>
Paul Broadley Moody,	A.B.		<i>Detroit.</i>
Charles Hubert Mooney,	B.L.	64	<i>Lake Odessa.</i>
Vincent Cuthbert Mooney,	B.L.	30	<i>Chicago, Ill.</i>
Anna Moore,	B.L.		<i>Ann Arbor.</i>
Ida Belle Moore,	A.B.	102	<i>Frankfort, Ind.</i>
Laura Moore,	Ph.B.	8	<i>St. Clair.</i>
Charles Rufus Morey,	A.B.		<i>Charlotte.</i>
Julia Louise Morey,	Ph.B.	65	<i>La Grange, Ill.</i>
Warren Pearl Morrill,	Ph.B.	32	<i>Benton Harbor.</i>
Carlton Dolphin Morris, M.D.,			<i>Decatur.</i>
Charles Clements Morris,	Ph.B.	35	<i>Bell Brook, O.</i>
Earl Herbert Morris,	Ph.B.	58	<i>Bell Brook, O.</i>
Mary Gertrude Morris,			<i>Ann Arbor.</i>
Mary Morrison,	B.S.		<i>Hancock.</i>
Benjamin Carl Morse,	B.L.	76	<i>Ann Arbor.</i>
Edward Louie Moseley,	B.L.	20	<i>Grand Rapids.</i>
Paul Moses,	Ph.B.		<i>Chicago, Ill.</i>
Lillian Moss,			<i>Paris, Mo.</i>
Carrie Bliss Mowry,	A.B.	54	<i>Saginaw, East Side.</i>
Elmer William Mulford,	Ph.B.		<i>Detroit.</i>
Louise Emily Mumm,			<i>Moline, Ill.</i>
Benjamin Lindley Murray,			
Ph.C.,	B.S. (Chem.)	100	<i>Ypsilanti.</i>
Alice Nash,			<i>Detroit.</i>
Thomas Algin Neal,	B.S.		<i>Ann Arbor.</i>
Jennie Neil,	B.L.		<i>Grand Haven.</i>
Alfred Latimer Newton,	A.B.		<i>Saginaw, East Side.</i>

Maidie Newton,	Ph.B.	89	<i>Maple Rapids.</i>
Fanny Theresa Nichols,	B.L.	39	<i>Lansing.</i>
Charles Chesterfield Nicola,	B.S. (Bio.)	99	<i>Battle Creek.</i>
Clifford Lyman Niles,	Ph.B.	4	<i>Anamosa, Ia.</i>
Edla Niles,	Ph.B.	28	<i>Ann Arbor.</i>
Eva Lulu Niles,	Ph.B.		<i>Ann Arbor.</i>
Clarence Warren Noble,	Ph.B.	30	<i>Ann Arbor.</i>
Edwin Sears Noble,	B.L.		<i>Elk Rapids.</i>
Albert Noordewier,	B.S.	31	<i>Fisher Station.</i>
Robert White Norrington,	B.L.		<i>West Bay City.</i>
Clifton Ranney Norton,	B.L.	36	<i>Sault Ste. Marie.</i>
Henry Hazzard Norton,	A.B.		<i>Howell.</i>
Harry Davidson Nutt,	A.B.	98	<i>Hancock, N. Y.</i>
Bertha von Verson O'Brien,	B.L.		<i>Detroit.</i>
William James O'Brien, A.B.,			
<i>Detroit College,</i>	B.S. (Chem.)	64	<i>Detroit.</i>
Mary Elizabeth O'Connor,			<i>Denver, Col.</i>
Gustavus Adolphus Ohlinger, A.B.		16	<i>Ann Arbor.</i>
Schuyler Seager Olds, Jr.,	Ph.B.	30	<i>Lansing.</i>
Paul Oliver,	B.S.	4	<i>Chicago, Ill.</i>
Albert Oscar Olson,	B.L.	31	<i>Chicago, Ill.</i>
Lauretta May O'Meara,	B.L.	85	<i>Marquette.</i>
Abraham Philip Oppenheim,	Ph.B.		<i>Dowagiac.</i>
Almerene M. Orsborn,	Ph.B.	89	<i>Eaton Rapids.</i>
Clinton Samuel Osborn,	A.B.	48	<i>Grand Rapids.</i>
Frederick Arthur Osborn,	Ph.B.	88	<i>Saginaw, East Side.</i>
Lloyd Lynn Osborn,	A.B.	12	<i>Washington.</i>
Morley Ernest Osborne,	B.L.	4	<i>Denmark.</i>
Joe Osburn,	Ph.B.		<i>Owosso.</i>
Abraham Lincoln Osgood,			<i>Pittsfield, N. H.</i>
Belle Lucinda Otis,	Ph.B.	56	<i>Ann Arbor.</i>
Marion Adelia Otis,	A.B.	64	<i>Ann Arbor.</i>
Charles Brainerd Paddock,	B.S.	61	<i>Wichita, Kan.</i>
Edna Littlefield Paddock,	B.L.	63	<i>Coldwater.</i>
Nina Howarth Paddock,	Ph.B.	80	<i>Ann Arbor.</i>
Jessie Mabel Palmer,	Ph.B.	9	<i>Duluth, Minn.</i>
John Chauncey Palmer,	B.L.		<i>Big Rapids.</i>
Ralph Fleetwood Palmer,	Ph.B.	25	<i>Marquette.</i>
Emma Grace Palmerlee,	Ph.B.	94	<i>Romeo.</i>
Henry Hall Parke,	B.L.	20	<i>Sycamore, Ill.</i>
Flora Estelle Parker,	B.L.	8	<i>Detroit.</i>
James Joseph Parker,			<i>Fort Smith, Ark.</i>
Milton Ray Parmelee,	B.L.	63	<i>Concord.</i>

Carl Copeland Parsons,	A.B.	87	<i>Saginaw, West Side.</i>
Charles Baxter Parsons,			<i>Detroit.</i>
Andrew Paton,	B.S.	60	<i>Opechee.</i>
Caroline Esther Pattengill,	A.B.	4	<i>Ann Arbor</i>
Susan Frances Patterson,	A.B.	46	<i>Detroit.</i>
George Fred Paul,	A.B.	9	<i>Peoria, Ill.</i>
Harry G. Paul,	A.B.	65	<i>Peoria, Ill.</i>
Mary Wythe Peckham,	Ph.B.	30	<i>Ann Arbor.</i>
Bessie Chase Peek,	B.L.	95	<i>Oregon, Ill.</i>
Grace Darling Peele,	B.S.		<i>Jersey City, N. J.</i>
James Blakeley Pell,	A.B.	11	<i>Akron, O.</i>
Inez Christabel Perrin,	A.B.	55	<i>Detroit.</i>
Edith May Perry,			<i>Detroit.</i>
Mary McCreary Peters,	Ph.B.	91	<i>Ann Arbor.</i>
Frances Lillian Petit,	A.B.		<i>Port Huron.</i>
Alexander K. Petrie,	B.L.	30	<i>St. Johns.</i>
Frank Henry Petrie,	A.B.	69	<i>Muskegon.</i>
Jane E. Petrie,			<i>Grand Rapids.</i>
John H. Petrie,	B.L.	48	<i>St. Johns.</i>
Roy Elton Pettit,	B.L.	11	<i>Ithaca.</i>
George Pfirshing,	Ph.B.	25	<i>Chicago, Ill.</i>
Joseph Baird Pfirshing,	B.L.	12	<i>Chicago, Ill.</i>
†Harry Benjamin Phelps,			<i>West Bay City.</i>
Margaret Van Ness Phelps,			<i>Dexter.</i>
Mary Elizabeth Phelps,			<i>Flushing.</i>
Nancy Seymour Phelps,	Ph.B.		<i>Dexter.</i>
Maud Phillips,			<i>Ann Arbor.</i>
Charlotte Elizabeth Pickett,	B.S. (Bio)	94	<i>Ann Arbor.</i>
Julia Pike,	Ph.B.	56	<i>Grand Rapids.</i>
Hurlbert Henry Pinney,			<i>Council Bluffs, Ia.</i>
Lewis Clark Plant,			<i>Nunica.</i>
Hugh James Polkey,	B.S.		<i>Chicago, Ill.</i>
Tom Leander Pollock,	A.B.	8	<i>Bloomington, Ill.</i>
Florence Helen Pomeroy,	B.L.	37	<i>Ann Arbor.</i>
Klaas Poppen,	Ph.B.	77	<i>Drenthe.</i>
Jessie Chesebrough Porter,	Ph.B.	91	<i>Marshall.</i>
Frank Ira Post,	B.S. (Chem.)		<i>Coldwater.</i>
Grace Trowbridge Potter,	A.B.	44	<i>Detroit.</i>
Harry Barent Potter,	B.L.	8	<i>Saginaw, West Side.</i>
Nathan S. Potter, Jr.,	B.S. (Chem.)	15	<i>Jackson.</i>
Robert Bliss Potter,	B.L.	8	<i>Saginaw, West Side.</i>
Alice Maude Pound,	Ph.B.	93	<i>Pontiac.</i>
Josephine Perry Powell,	Ph.B.	31	<i>Marquette.</i>

Florine Maude Pratt,	Ph.B.	30	<i>Coldwater.</i>
Louis Albert Pratt,	B.L.	93	<i>Traverse City.</i>
James Hendry Prentiss,	B.L.	94	<i>Canon City, Col.</i>
Jennie May Price,	Ph.B.	64	<i>Jackson.</i>
Margaret Tripp Price,			<i>Jackson.</i>
Flora Prowdley,			<i>Constantine.</i>
Katharine Elizabeth Punch-			
eon,	B.L.	96	<i>Philadelphia, Pa.</i>
William Prest Purfield,	B.S.		<i>Ann Arbor.</i>
Joseph Henry Quarles,	Ph.B.	99	<i>Milwaukee, Wis.</i>
Matthew Quinlan,	B.L.	35	<i>Chicago, Ill.</i>
Hellen Elisabeth Ramsdell,			<i>Manistee.</i>
Lewis Stanton Ramsdell,	B.S.		<i>Manistee.</i>
Floyd Hamilton Randall,	B.S.	63	<i>West Bay City.</i>
Lida Eleanor Randall,	Ph.B.	86	<i>Huntley, Ill.</i>
Thomas Ernest Rankin,	A.B.	39	<i>Detroit.</i>
Charles Fish Rathfon,	B.S.	32	<i>Port Huron.</i>
William Thomas Reece,	Ph.B.		<i>Jackson.</i>
Katherine Reed,			<i>Chicago, Ill.</i>
Mary Lyle Reid,			<i>Champion.</i>
Rodolphe Ransom Reilly,	B.L.	6	<i>Chicago, Ill.</i>
Orlando Schairer Reimold,	A.B.	63	<i>Saginaw, West Side.</i>
Frederick Eugene Reinfrank,	B.S.		<i>Perrysburg, O.</i>
Minerva Belle Rhines,	B.L.	64	<i>Detroit.</i>
Charles Jacob Rice,	B.S.	31	<i>Columbia.</i>
Nellie Fuller Rice,	A.B.	15	<i>Grand Rapids.</i>
Herbert Matteson Rich,	B.L.	73	<i>Middleville.</i>
William Barrett Rich,	Ph.B.	58	<i>Chicago, Ill.</i>
Florence Loring Richards,	Ph.B.	28	<i>Ann Arbor.</i>
J. DeForest Richards,			<i>Douglas, Wyo.</i>
Susannah Hartley Richard-			
son,	A.B.	19	<i>Ann Arbor.</i>
Nellie Eveline Rickert,	B.L.	27	<i>Elgin, Ill.</i>
Charles Francis Riedinger,	Ph.B.	36	<i>Marquette.</i>
Charles Augustus Riegelman,	A.B.		<i>New York, N. Y.</i>
Irving Washington Riegel-			
man,	B.L.		<i>New York, N. Y.</i>
John Frederick Rieman,	B.S. (Chem.)	56	<i>Hadley.</i>
Artemas Wilson Riggs,	B.S.	96	<i>Kansas City, Mo.</i>
Florence Edith Ringgold,	Ph.B.	29	<i>South Bend, Ind.</i>
Laura Minnie Rinkle,	Ph.B.		<i>Boonville, N. Y.</i>
Charlotte Jeanette Roberts,	Ph.B.	59	<i>South Bend, Ind.</i>
<i>Cora Hattie Robinson,</i>			<i>St. Johns.</i>

Harry Charles Robinson,	A.B.	32	<i>Detroit.</i>
Herbert Beverly Robinson,	Ph.B.		<i>Chicago, Ill.</i>
Maude Alleen Robinson,	A.B.	38	<i>Battle Creek.</i>
Pearl Ernestine Robinson,	B.L.	92	<i>Lansing.</i>
Winnie Josephine Robinson,			<i>Ypsilanti.</i>
Allen Frank Rockwell,	B.S.	91	<i>Chelsea.</i>
Dean Dewey Rockwell,	B.L.		<i>Midland.</i>
Abbie Roe,			<i>Harbor Springs.</i>
Clifford Griffith Roe,	A.B.	12	<i>Chicago, Ill.</i>
Curt Rosenow,	B.S. (Chem.)	71	<i>Peoria, Ill.</i>
George Henry Rosenthal,	B.L.		<i>Chicago, Ill.</i>
Alice Eleonore Rothmann,	Ph.B.	92	<i>Ann Arbor.</i>
Augustine Rousseau,	A.B.	30	<i>Peoria, Ill.</i>
Russell Sturgis Rowland,	B.S. (Bio.)	45	<i>Grand Rapids.</i>
Clarence D. Rowley,	Ph.B.	50	<i>Rochester, N. Y.</i>
John Hiram Ruckman,	B.S.	88	<i>Saline.</i>
Herbert Walter Runnels,	B.S.		<i>Sault Ste. Marie.</i>
Herman Russell,	B.S.	31	<i>Manistee.</i>
Sadie P. Ryan,	A.B.		<i>Ann Arbor.</i>
Frank Prather Sadler,	A.B.	93	<i>Grove City, Ill.</i>
Adah Sanders,	B.S. (Chem.)	84	<i>Ypsilanti.</i>
Irma Estelle Sanford,	Ph.B.	31	<i>Ionia.</i>
William Sanger,	A.B.	23	<i>Toledo, O.</i>
Gertrude Savage,	Ph.B.	39	<i>Cassopolis.</i>
Christabel Hortense Sawyer,	Ph.B.	18	<i>Cadillac.</i>
Murray Seligman Schloss,	Ph.B.	11	<i>Detroit.</i>
Harry Garr Schock,	A.B.	88	<i>South Bend, Ind.</i>
James Herbert Scott,	A.B.	104	<i>St. Louis.</i>
Charles Ward Seabury,	A.B.	31	<i>Oak Park, Ill.</i>
Fanny May Seaver,	B.L.	91	<i>Bronson.</i>
Walter Randall Seavey,			<i>Ann Arbor.</i>
Roda Selleck,	A.B.	32	<i>Bay City.</i>
Allen Joshua Seney,	Ph.B.	84	<i>Toledo, O.</i>
Henry Ormal Severance,	A.B.	76	<i>Walled Lake.</i>
James Seymour, Ph.C.,			<i>Ann Arbor.</i>
Ida Ellen Shaw,	Ph.B.	50	<i>Clarksville, Ia.</i>
John Rawlings Sheean,	Ph.B.	57	<i>Anamosa, Ia.</i>
Sadie Eleonore Sheehan,	A.B.	91	<i>Niles.</i>
Walter Humphreys Shelby,	B.L.	29	<i>Grand Rapids.</i>
Lucile Abigail Shelley,	Ph.B.	23	<i>Cedar Rapids, Ia.</i>
George Edwards Sherman,	A.B.	5	<i>Ypsilanti.</i>
Bernath Pardee Sherwood,	B.L.	26	<i>Allegan.</i>
Bertha Marion Sherwood,	B.S. (Bio.)	58	<i>White Cloud.</i>

George Curtiss Shirts,	Ph.B.	31	<i>Grand Rapids.</i>
Thomas Trufant Shoemaker,	Ph.B.		<i>Mt. Clemens.</i>
Joseph Sill,	A.B.	58	<i>Detroit.</i>
Lucie Abigail Sill,	A.B.	4	<i>Chicago, Ill.</i>
Russell Mix Simmons,	B.L.	4	<i>Aurora, Ill.</i>
Charles Simons,	B.L.	23	<i>Detroit.</i>
Frank Stanton Simons,	A.B.	29	<i>Detroit.</i>
George Reginald Sims,	Ph.B.		<i>West Bay City.</i>
Charles Everett Skinner,	Ph.B.	92	<i>Adrian.</i>
Fred Hart Skinner,			<i>Battle Creek.</i>
Martha Anne Slater,	Ph.B.		<i>Ann Arbor.</i>
Flora Slayton,	A.B.		<i>Grand Rapids.</i>
Ivy Slayton,			<i>Grand Rapids.</i>
Lewis Conrad Sleeper,	Ph.B.	90	<i>Lansing.</i>
Katharyne Griffith Sleneau,	A.B.	60	<i>Ann Arbor.</i>
Archibald Whittier Smalley,	A.B.	42	<i>Chicago, Ill.</i>
Angus Smith,	Ph.B.	30	<i>Detroit.</i>
Arthur Maurice Smith,	Ph.B.	63	<i>Ionia.</i>
Bernice Sollitt Smith,	Ph.B.		<i>Ann Arbor.</i>
Charles Stevens Smith,	B.S.	22	<i>Battle Creek.</i>
Harry Alfred Smith,	B.L.	8	<i>Saginaw, West Side.</i>
Hervey Montgomery Smith,	A.B.	62	<i>Bloomsburg, Pa.</i>
Jeannette Smith,	B.L.	54	<i>Ann Arbor.</i>
Jessie Hunter Smith,	A.B.	63	<i>Ann Arbor.</i>
Mary Jennie Smith,	Ph.B.	7	<i>Ann Arbor.</i>
Ruth Lydia Smith,			<i>Chicago, Ill.</i>
Shirley Wheeler Smith,	B.L.	68	<i>Hastings.</i>
Winnifred Smith,	Ph.B.	24	<i>Cassopolis.</i>
Electra Blood Solis,			<i>St. Clair.</i>
Julia Annette Soule,			<i>Grand Haven.</i>
John Cecil Spaulding,	A.B.	53	<i>St. Johns.</i>
Alberta Jeannette Spore,	Ph.B.		<i>West Bay City.</i>
Flora Mae Spore,	Ph.B.		<i>West Bay City.</i>
James Sprankle,	B.L.		<i>Muncie, Ind.</i>
Gertrude Louise Springer,	B.L.	21	<i>Chicago, Ill.</i>
Henry Winslow Standart,	B.L.	19	<i>Detroit.</i>
Arthur Dickie Stansell,	B.L.		<i>Detroit.</i>
George Howe St. Clair,	B.S.	90	<i>Duluth, Minn.</i>
Francis Morley Stead,	A.B.	8	<i>Holloway.</i>
Mamie Catherine Stegath,	B.L.	22	<i>Escanaba.</i>
William Dietrich Steinkamp,			<i>St. Louis, Mo.</i>
Mary Salome Steinmetz,			<i>Philadelphia.</i>
Herbert Philip Stellwagen,	B.S.	32	<i>Wayne.</i>

Wellington D. Sterling,	B.L.	50	Hastings.
Adda Laura Stevens,			Ann Arbor.
Bessie Bingham Stevens,	A.B.	102	Ann Arbor.
Herman LeRoy Stevens,	Ph.B.		Port Huron.
Karl Krenkell Stevens,	B.S.	10	Saginaw, East Side.
Ada Stewart,	A.B.	102	Peoria, Ill.
Clinton George Stewart,	A.B.	60	Newark, O.
Kathrine Mitchell Stewart,			Lake Linden.
Louise Burnett Stickney,			Grand Haven.
Marion Stickney,	B.L.	8	Grand Haven.
Henry Increase Stimson,	Ph.B.		Chelsea.
Frank Adams Stivers, LL.B.,			Liberty, Ind.
Helen May St. John,	Ph.B.		Ann Arbor.
J. Sterling St. John,	B.L.	116	Ann Arbor.
George Chickering Stone,	B.L.	16	Saginaw, West Side.
Clara Dorothy Stonebraker,	Ph.B.		Bay City.
Albert Henry Stoneman,	A.B.	59	Ann Arbor.
Susan Lavinia Stoner,	B.L.	87	Centre View, Mo.
Oscar Strauss,	Ph.B.	32	Des Moines, Ia.
Leonard John Stringer,			Detroit.
Duane Reed Stuart,	A.B.	102	Detroit.
Mary Belle Stuart,			Schoolcraft.
Howard Stuch,	Ph.B.		Allegan.
Grace Delafield Sturges,	Ph.B.	108	Oak Park, Ill.
Don David Sturgis,	B.L.	31	Ann Arbor.
James Wellings Sturgis,	A.B.	89	Ann Arbor.
Martha Theresa Sturgis,			Ann Arbor.
Anna Zita Sullivan,	B.S.		Ann Arbor.
Mary Inez Sumner,	A.B.	58	Kalamazoo.
Carl Sundstrom,	B.S.		Trenton.
Thomas Gowdy Sutherland,			Saginaw, West Side.
Richard Huss Sutphen,	A.B.	55	Defiance, O.
George Robert Swain,	A.B.	41	Lakeport, N. H.
Frederick Tyndall Swan,			Potsdam, N. Y.
Andrew Lester Swinton,	B.S.		Calumet.
Mary Richardson Swope,			Louisville, Ky.
Ralph Cone Taggart,	Ph.B.	68	Grand Rapids.
Margaret Lloyd Tatlock,	A.B.	4	Ann Arbor.
Arthur Ostrander Taylor,	A.B.		Ann Arbor.
George Robert Taylor,	A.B.	2	Ann Arbor.
Harriet Shourds Taylor,	Ph.B.	62	Detroit.
Ina Pamella Taylor,	Ph.B.	8	Ann Arbor.
James Stewart Taylor,	B.S.	28	Almont.

Joseph Harry Taylor,			<i>Ann Arbor.</i>
Katharine Taylor,			<i>Ionia.</i>
May E. Taylor,	Ph.B.	60	<i>Ann Arbor.</i>
Wesley Ewing Taylor,	B.S.	54	<i>Wheelersburg, O.</i>
William Warren Taylor,	B.S.	90	<i>Kasson, Minn.</i>
Laura Pauline Temple,	A.B.	28	<i>Granville, N. Y.</i>
Ida Bell Tenney,			<i>Troy, O.</i>
Ida Margaret Thain,	B.L.	14	<i>Oak Park, Ill.</i>
Maude Hayes Thayer,	A.B.	4	<i>Grand Rapids.</i>
Russell B. Thayer,	B.L.		<i>Saginaw, East Side</i>
John Frederick Thomas,	B.L.	54	<i>South Bend, Ind.</i>
Joseph Morris Thomas,	Ph.B.	22	<i>Douglas.</i>
Firman Thompson,	B.S. (Chem.)	93	<i>New Carlisle, O.</i>
Louise S. Thompson,	A.B.	39	<i>Ann Arbor.</i>
Margaret Thompson,	B.L.		<i>Northville.</i>
May Evelyn Thompson,	B.S.		<i>Worden.</i>
Nathan Platt Thompson,	Ph.B.		<i>Port Huron.</i>
Nelson Walter Thompson,	B.S.		<i>Detroit.</i>
William Harold Thompson,			
LL.B.,	Ph.B.	74	<i>Alexandria, Minn.</i>
Darling Zena Thomson,	B.L.	97	<i>Lake Charles, La.</i>
Julien Harrington Thomson,	B.L.		<i>Port Huron.</i>
Alice M. Thorne,	B.L.	8	<i>Toledo, O.</i>
Walter Hannibal Thorp,	Ph.B.	99	<i>Detroit.</i>
Olin Merchant Thrasher,			<i>Holly.</i>
Jefferson Gage Thurber,	Ph.B.	12	<i>Detroit.</i>
Mabel Tibbott,			<i>Ann Arbor.</i>
John Beach Tillotson,	B.S. (Chem.)	68	<i>Owosso.</i>
Charles Ernest Tompkins,	B.S. (Bio.)	32	<i>Benton Harbor.</i>
Lillian Medora Tompkins,			<i>Bay City.</i>
Carrie Tower,	B.L.	4	<i>Ann Arbor.</i>
David Mason Tracy,			<i>Ann Arbor.</i>
Delmer Harry Traphagen,	B.L.		<i>Fenton.</i>
Frederic Laurence Travers,	B.L.	8	<i>Saginaw, East Side</i>
Nettie Treadwell,			<i>Ann Arbor.</i>
Lizzie Trebilcox,	A.B.	89	<i>Ypsilanti.</i>
Sidney Beach Tremble,	B.L.	46	<i>Marshall.</i>
Grace Hall Trowbridge,			<i>Ann Arbor.</i>
Charles Thomas Tryon,	A.B.	13	<i>Bay City.</i>
Friedrich Max Tschirner,	B.S. (Chem.)	63	<i>St. Louis, Mo.</i>
Monna Julia Tucker,	B.L.	77	<i>Ann Arbor.</i>
George Tupper,	B.S. (Bio.)	105	<i>Kaneville, Ill.</i>
Clara Turner,	Ph.B.	2	<i>Battle Creek.</i>

Lila Turner,	A.B.	18	<i>Battle Creek.</i>
Marvin Walter Turner,	B.L.	37	<i>Grand Haven.</i>
Nellie May Turner,	Ph.B.	38	<i>Monroe.</i>
Alonzo Hubert Tuttle,	A.B.	98	<i>Decatur, Ill.</i>
Ruth Moorhead Tuttle,	Ph.B.	95	<i>Niles.</i>
Richard Chute Underwood,	A.B.	31	<i>LaFayette, Ind.</i>
Phillip Gilbert Uttley,			<i>Knobnoster, Mo.</i>
Robert Brainard Vaile,	B.S.	26	<i>Oak Park, Ill.</i>
Lawrence Hoffman van den Berg,	B.L.	33	<i>Grand Haven.</i>
Fred Frisbie Vandercook,	B.L.	8	<i>Deer Creek.</i>
LaRue Van Hook,	A.B.	4	<i>El Paso, Ill.</i>
Arthur Henry Van Horn,	A.B.	35	<i>Charlotte.</i>
Edith Augusta Van Kleeck,	Ph.B.		<i>Bay City.</i>
Mabel Van Kleeck,	Ph.B.		<i>Ann Arbor.</i>
Joseph Henry Van Tassel,			<i>Detroit.</i>
LL.M.,			<i>Detroit.</i>
Horace Hill Van Tuyl,	Ph.B.	91	<i>Detroit.</i>
Claude Halstead Van Tyne,	A.B.	91	<i>Tecumseh.</i>
Lisla Alice Van Valkenburg,	Ph.B.		<i>Ann Arbor.</i>
James Garrit Van Zwaluwenburg,	B.S.	45	<i>Holland.</i>
Gertrude Elizabeth Vaughn,	A.B.	4	<i>Ann Arbor.</i>
Leonard D'Ooge Verdier,	A.B.		<i>Grand Rapids.</i>
Geddie Gideon Vernier,	B.L.		<i>Detroit.</i>
Harry Scott Vernon,	B.S. (Bio.)		<i>Chicago, Ill.</i>
Paul Harold Vernor,	A.B.	70	<i>Marshall.</i>
James Irving Vincent,	B.L.	105	<i>Yale.</i>
Lillie Mae Volland,	B.L.	97	<i>Ann Arbor.</i>
Herbert Sebring Voorhees,			<i>White Lake.</i>
Paul Warren Voorhies,	B.L.	39	<i>Ann Arbor.</i>
William Vought,	Ph.B.	4	<i>Michigan City, Ind.</i>
Evelyn C. Vyn,	Ph.B.	4	<i>Grand Rapids.</i>
Duane Harry Wagar,	B.L.		<i>Chicago, Ill.</i>
Hadley Horton Walch,	A.B.	111	<i>Grand Rapids.</i>
Emma Frances Wald,	Ph.B.	100	<i>Bay City.</i>
Frederick Rice Waldron,	A.B.	41	<i>Jackson.</i>
Louis Carlisle Walker,	B.S.	97	<i>Alpena.</i>
Grace Bunting Wallace,	Ph.B.	61	<i>Fort Huron.</i>
Charles Curtis Wallin,	A.B.	32	<i>Grand Rapids.</i>
Matthew John Walsh,	A.B.	47	<i>Grand Rapids.</i>
Minnie E. Walter,			<i>Olsego.</i>
Nellie Margaret Walters,	B.L.	8	<i>Ishpeming.</i>

J. Foster Flagg Waltz,	B.L.		<i>Decatur, Ill.</i>
Estella May Ward,	Ph.B.		<i>Birmingham.</i>
Winifred Ware,			<i>North Lansing.</i>
Arthur Hallam Warner,	B.L.	32	<i>Washington, D. C.</i>
Agnes Mary Warren,	Ph.B.	103	<i>Springfield, Ill.</i>
Samuel Hills Warriner,	A.B.	28	<i>Saginaw, East Side.</i>
Charles Lee Watson,	A.B.	55	<i>Corunna.</i>
Clyde Irvin Webster,	Ph.B.		<i>Eaton Rapids.</i>
Montgomery Webster,	A.B.		<i>Ionia.</i>
Walter Roy Weeks,	Ph.B.		<i>Jackson.</i>
Louise Pauline Weinmann,	A.B.	28	<i>Ann Arbor.</i>
Harry Isaac Weinstein,	B.S.	23	<i>Philipsburg, Mon.</i>
Christian Friedrich Weiser,	A.B.	106	<i>Three Rivers.</i>
Maud Apollona Wellman,	Ph.B.	54	<i>Port Huron.</i>
Heber Armstrong Wells,			<i>Carthage, Mo.</i>
Daniel John Wessels,			<i>Cape Town, South Africa.</i>
Francis Henry Wessels,	A.B.	104	<i>Battle Creek.</i>
Stella Westcott,	A.B.	71	<i>Maywood, Ill.</i>
Berthel Wetmore,	B.L.	31	<i>Cheboygan.</i>
Florence Wetmore,	Ph.B.	8	<i>Ann Arbor.</i>
Harold Butler Wetmore,	A.B.	24	<i>Detroit.</i>
Abram Oren Wheeler, Jr.,	B.L.		<i>Manistee.</i>
William Macky Wherry, Jr.,	B.S.	20	<i>Covington, Ky.</i>
Charles Grosvenor White,	B.L.	37	<i>Jonesville.</i>
Eliza Van Horn White,			<i>Ann Arbor.</i>
Hugh White,	Ph.B.		<i>Lapeer.</i>
Jennie Patterson White,	Ph.B.	69	<i>Peoria, Ill.</i>
Bessie May Whitehead,	B.L.	84	<i>Chicago, Ill.</i>
Frank Borsinger Whitehead,			<i>Chicago, Ill.</i>
Lloyd Charles Whitman,	A.B.	92	<i>Ann Arbor.</i>
Roland Dare Whitman,	A.B.	48	<i>Ann Arbor.</i>
Harlan Keith Whitney,			<i>Battle Creek.</i>
Rose May Whitney,			<i>Battle Creek.</i>
Robert Harvey Whitten,	B.L.	105	<i>South Bend, Ind.</i>
Jessie Elon Whitsit,	B.S.	99	<i>Ann Arbor.</i>
Matthew Beale Whittlesey,	Ph.B.		<i>Detroit.</i>
Eva Amelia Wier,	A.B.	84	<i>Mason City, Ia.</i>
Montie Lyons Wiers,	A.B.	32	<i>Davis.</i>
Nina Allene Wilber,	A.B.	25	<i>Howell.</i>
Frances Sarah Wilcox,	Ph.B.	60	<i>Adrian.</i>
Herbert Orlando Wilcox,			<i>Fenton.</i>
Lizzie Lee Wilcox,	A.B.	27	<i>Negaunee.</i>

Nellie Wilcox,	B.S.		<i>Corunna.</i>
Willis Hamel Wilcox,	Ph.B.	85	<i>Elva.</i>
Arlo Ray Williams,	B.S.	30	<i>Ann Arbor.</i>
Ethelberta Williams,	B.L.	8	<i>Montrose, Pa.</i>
Jennie Williams,			<i>Emporia, Kan.</i>
Theresa Gertrude Williamson,	B.S.	57	<i>Mt. Vernon, N. Y.</i>
Mabel Willison,			<i>Decatur.</i>
Esther Gilbert Willoughby,			
M.D.,			<i>Ann Arbor.</i>
Jean Watson Wilson,	B.L.	59	<i>Detroit.</i>
Katherine D. Wiltsie,	Ph.B.	86	<i>Detroit.</i>
Ida Ethelwyn Wing,	B.L.	41	<i>Ludington.</i>
Jessie Henrietta Wing,	Ph.B.	2	<i>Ludington.</i>
Bertha Helen Wise,	B.L.	10	<i>Cedar Falls, Ia.</i>
Arthur Robert Wistrand,	B.L.		<i>Menominee.</i>
Mae Woldt,	B.S.	60	<i>Indianapolis, Ind.</i>
Junia Mabelle Wolff,	B.L.		<i>Kendallville, Ind.</i>
John David Wombacher,	B.L.	55	<i>Peoria, Ill.</i>
Andrew Holister Wood,	Ph.B.		<i>Ann Arbor.</i>
Roscoe Mark Wood,	A.B.		<i>Saline.</i>
Rose Marie Wood-Allen,	B.S.		<i>Ann Arbor.</i>
Morrison Colyer Woodard,	Ph.B.	66	<i>Clinton, Wis.</i>
Thomas Robert Woodrow,	Ph.B.	29	<i>Ann Arbor.</i>
Clinton Hardy Woodruff,	B.S.	22	<i>Ann Arbor.</i>
George Augustus Woodruff,	B.L.	18	<i>Benton Harbor.</i>
Jennie Morgan Woods,	A.B.		<i>Ann Arbor.</i>
Jedediah Foss Woolley,			<i>Kanab, Utah.</i>
Eugene Charles Worden,	Ph.B.	25	<i>Grand Rapids.</i>
Arthur Roy Wren,	B.S. (Chem.)	36	<i>Muskegon.</i>
Bertha Wright,	B.S.		<i>Ishpeming.</i>
Daniel Hubbard Wright,	B.L.	75	<i>Mason.</i>
Fred Hankinson Yable,			<i>Mendon.</i>
Blanche Martha Young,	A.B.	43	<i>Marquette.</i>
Mary Estelle Young,			<i>Danville, Ill.</i>
Allen Howard Zacharias,	B.L.	6	<i>Detroit.</i>
Elizabeth Zahner,	B.L.	48	<i>Saginaw, East Side</i>
Theodore Zbinden,	A.B.	15	<i>Toledo, O.</i>
Cornelia Zimmerman,			<i>Three Oaks.</i>

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ALBERT A. PASSOLT, B. S.

ROBERT A. WINSLOW.
JOHN M. SMOOTS.
HORACE T. PURFIELD.
THOMAS ORR.

STUDENTS.

RESIDENT GRADUATES.

NAME.	RESIDENCE.
John Robins Allen, B.S. (M.E.), 1892,	<i>Milwaukee, Wt.</i>
Abraham Lincoln Burgan, B.S. (E.E.), 1895,	<i>Lake Linden.</i>
Thomas Henry Ferguson, Ph.B., 1895,	<i>Detroit.</i>
Albert Emerson Greene, Ph.B., 1895,	<i>Ann Arbor.</i>
David LeFavour, B.S. (C.E.), 1895,	<i>Bay City.</i>
Charles Hosmer Morse, Jr., B.S. (M.E.), 1895.	<i>Chicago, Ill.</i>

CANDIDATES FOR A DEGREE IN ENGINEERING, STUDYING IN ABSENTIA.

NAME.	RESIDENCE.
Will Hazen Boughton, B.S. (C.E.), 1893,	<i>Granville, O.</i>
Charles Augustine Miner, B.S. (C.E.), 1895,	<i>New Orleans, La.</i>
William Vaughan Moses, B.S. (M.E.), 1889,	<i>Cambridge, Mass.</i>
Mhnott Eugene Porter, B. S. (C.E.), 1893,	<i>Washington, D. C.</i>
Robert Lemuel Sackett, B.S. (C.E.), 1891,	<i>Richmond, Ind.</i>
Gardner Stewart Williams, B.S. (C.E.), 1889,	<i>Detroit.</i>

UNDERGRADUATES.*

NAME.	COURSE.	CREDIT.	RESIDENCE.
Emanuel Anderson,	M.	12	<i>Chicago, Ill.</i>
James Chivis Armstrong,	E.	11	<i>Detroit.</i>
Norwood Brahman Ayers,	E.		<i>Omaha, Neb.</i>
Charles Wiley Baggott,	C.	68	<i>Ludington.</i>
Benjamin Franklin Bailey,	E.	42	<i>Detroit.</i>
James Baird,	C.	95	<i>Chicago, Ill.</i>

*The letters in the column headed **COURSE** indicate the work the student is pursuing as a candidate for a degree; C, denoting civil engineering; M, mechanical engineering; E, electrical engineering; Min., mining engineering. The requirements for graduation for students in the mining engineering course are the same as given in the Calendar for 1894-95, pages 112 and 113. Where no abbreviation is given, the student is pursuing miscellaneous studies without being registered as a candidate for a degree. The figures in the column headed **CREDIT** indicate the number of hours of work taken by candidates for degrees prior to the beginning of the current academic year, 1895-96, and completed without conditions, or credited to them on advanced standing. By an hour of work is meant the equivalent of one exercise a week for one semester. Compare page 134.

Fred Louis Baker,	M.	62	Hillsdale.
William Porter Baker,	E.	31	Woodville, O.
Eugene Norrell Baldwin,	E.	62	Jackson, Miss.
Mortimer Grant Barnes,	C.	104	Loretto, Neb.
Frederic Crossgrove Barr,	E.	25	Ann Arbor.
Mark Bary,	E.	61	Detroit.
Frederick Paul Beach,	E.	60	Lexington.
Irving McCoullough Bean,	E.		Milwaukee, Wis.
Mark Brewer Beattie,	E.		Ann Arbor.
George Welcome Benham,	C.	59	Detroit.
Clare A. Bennett,	C.	55	Fenton.
John Walter Frink Bennett,	E.	22	Austin, Ill.
Frederic Adrian Bergbom,	M.	8	Chicago, Ill.
William Louis Berger,	E.		Geneseo, Ill.
James Rowland Bibbins,	E.	14	Detroit.
Will Ambrose Biggs,	M.	8	Ann Arbor.
Arthur Woodward Birdsall,	E.	68	Lapeer.
Harry Hartwell Blades,	E.		Detroit.
Bert Norwood Blakeslee,	C.	35	Birmingham.
Murray Blanchard,	C.	30	Peru, Ill.
Frederick King Boomhower,	E.	19	Chateaugay, N. Y.
Cheshire Lawton Boone,	E.	38	Ypsilanti.
Frederick Chittenden Borst,	M.	31	Denver, Col.
William Chalmers Borst,	E.	112	Denver, Col.
Alexander Boyd,	M.	11	Chicago, Ill.
Walter Channing Boynton,	M.	8	Detroit.
Thomas Alfred Bragg,	M.	35	Grand Rapids.
Deward Augustus Britten,	E.	74	Ann Arbor.
Everett Dickson Brodhead,	E.	28	Coldwater.
Irving J. Brown,	E.	37	Niles.
Roy Wilcox Brown,	E.	31	Geneseo, Ill.
Frederick Lewis Browne,	M.	9	Bay City.
Harry Copley Buell,	M.	96	Ann Arbor.
Harry Owen Burkert,			Detroit.
Joseph Aldrich Bursley,	M.		Fort Wayne, Ind.
Joseph Wallace Busch,	E.	5	Marquette.
John Winford Byers,	E.	41	Grand Rapids.
Walter John Cahill,	C.	93	Chicago, Ill.
William Anderson Caldwell,			
Jr.,	E.	102	St. Louis, Mo.
Melancthon Woolsey Campau,	M.	67	Detroit.
Guy Elliott Carlton,	C.		Sault Ste. Marie.
George Moseley Chandler,	E.	47	Chicago, Ill.

James Corson Chase,	E.		<i>Chicago, Ill.</i>
Griswold Lane Chesebrough,	M.		<i>Detroit.</i>
Frank Culver Cheston,	M.	58	<i>Williamsport, Pa.</i>
Edgar Nelson Church,	M.		<i>Alma.</i>
James Walter Clift,	M.	12	<i>Washington, D. C.</i>
Philip Russell Coats,	E.	105	<i>Saginaw, East Side.</i>
Burnham Standish Colburn,	C.	111	<i>Detroit.</i>
Harley Lyman Cole,			<i>Palmyra.</i>
Ralph Collamore,	M.	63	<i>Toledo, O.</i>
Emmons Collins,	E.	76	<i>Western Springs, Ill.</i>
John Chassell Condon,	E.	103	<i>Ann Arbor.</i>
Jesse I. Conklin,	C.	104	<i>Springport.</i>
Merritt S. Conner,	E.	105	<i>Paw Paw.</i>
Charles Olney Cook,	M.	59	<i>Detroit.</i>
Edward Bliss Coolidge,	E.	38	<i>Detroit.</i>
Sollace Burroughs Coolidge,	E.	30	<i>Detroit.</i>
William Lee Cooper,	M.	8	<i>Saginaw, East Side.</i>
William Clayton Coryell,	M.	93	<i>Grand Rapids.</i>
Leonard Porter Coulter,	E.	30	<i>Danville, Ill.</i>
John Shepherd Cowgill,	E.	32	<i>Three Rivers.</i>
Granville Malcom Cox,	M.	30	<i>Chicago, Ill.</i>
Walter Turney Curtis,	C.	14	<i>Detroit.</i>
Fred Richard Cutcheon,	E.	104	<i>Grand Rapids.</i>
Henry Winter Daniels,	C.	28	<i>Onsted.</i>
Leon Elwood Decker,	C.	22	<i>Adrian.</i>
Burt J. Denman,	E.	14	<i>Toledo, O.</i>
Lewis Nelson DeVore,	C.	86	<i>West Middleburg, O.</i>
Will Earles DeWitt,	E.	67	<i>Saginaw, West Side.</i>
Isaac DeYoung,	C.	45	<i>Chicago, Ill.</i>
Bartlett Chase Dickinson,	C.	35	<i>Kalamazoo.</i>
Carl Myron Dowler,	M.		<i>Ann Arbor.</i>
Wilbert Shepard Drew,	M.	78	<i>Hillsdale.</i>
Louis Daniel Dwight,	C.	79	<i>Decatur.</i>
Fred Albert Eckert,	M.	96	<i>Romeo.</i>
Charles Morton Eddy,	M.	115	<i>Toledo, O.</i>
Jay D. Edmonds,	M.	95	<i>Taylor, Ill.</i>
John Adrian Elenbaas,			<i>Holland.</i>
Charles William Ellis,	E.	102	<i>Detroit.</i>
Elmer Myron Ellsworth,	C.	60	<i>Thornville.</i>
Amos Floyd Everett,	C.	21	<i>Lansing.</i>
Richard Deming Ewing,	C.	90	<i>Grand Rapids.</i>
Philip Henry Falter,	C.	56	<i>Chicago, Ill.</i>
Arthur John Farmer,	C.		<i>Detroit.</i>

Thaddeus Loomis Farnham, M.	53	<i>Green Oak.</i>
Howard Felver, E.	30	<i>Batavia, Ill.</i>
George Frederic Fisher, E.	28	<i>Ann Arbor.</i>
John Watson FitzGerald, M.	98	<i>Grand Rapids.</i>
William Burwell Flynn, E.	9	<i>Detroit.</i>
Burt Lewis Foster, M.	101	<i>Ann Arbor.</i>
Arthur Bernard Fox, E.		<i>LaPorte, Ind.</i>
Robert Myron Fox, C.	37	<i>Ann Arbor.</i>
Jed Burt Freund, M.	16	<i>Bulle, Mon.</i>
Frank Anton Fucik, M.	42	<i>Chicago, Ill.</i>
Herbert Rodgers Gates, E.	50	<i>Chicago, Ill.</i>
Henry Geismer, C.	66	<i>Ann Arbor.</i>
George Herbert Gibson, E.	10	<i>Northville.</i>
Melvin Albertus Gilbert, C.	34	<i>Bloomington, O.</i>
Francis Fair Gillen, C.	28	<i>Grand Haven.</i>
George Francis Gillett, E.	56	<i>Saginaw, West Side.</i>
Albert Edward Gilman, M.		<i>Ottawa, Ill.</i>
Leon Goldsmith, E.	31	<i>Denver, Col.</i>
Sergius Paul Grace, E.	95	<i>Ann Arbor.</i>
Clarence Edward Groesbeck, E.	23	<i>Grand Rapids.</i>
Augustus Ernest Guenther, E.	86	<i>Sandusky, O.</i>
Dwight May Guillotte, M.	84	<i>Saginaw, West Side.</i>
Omar Israel Hall, M.	53	<i>Ann Arbor.</i>
Joseph Gordon Hamblen, Jr., E.		<i>Detroit.</i>
Paul Hamilton, C.	96	<i>Kingston, Ill.</i>
Frederick Cyril Hannan, C.	18	<i>Chicago, Ill.</i>
Burr Hardy, M.		<i>Howell.</i>
George Herbert Harrington, C.	89	<i>Titusville, Pa.</i>
Harry Eli Harrington, E.	36	<i>Grand Rapids.</i>
Archie Lee Harris, C.	28	<i>Orange, Mass.</i>
Harmon Augustus Harris, E.		<i>Chicago, Ill.</i>
Sanford Frank Harris, E.		<i>Chicago, Ill.</i>
Henry Thomas Harrison, E.	61	<i>St. Louis.</i>
Milton Charles Hartman, E.	6	<i>Chicago, Ill.</i>
LeRoy Morton Harvey, E.	40	<i>Oak Park, Ill.</i>
Richard Matthew Heames, M.	34	<i>Detroit.</i>
Orra Emmet Heffelbower, C.	8	<i>Ann Arbor.</i>
Frederick William Henninger, E.	64	<i>Brooklyn, O.</i>
Guy Potter Henry, M.		<i>Davison.</i>
Daniel Brown Hibbard, Jr., E.	8	<i>Detroit.</i>
Clinton Jerome Hixson, E.	47	<i>Dupont, O.</i>
John Seldon Hoadley, C.	83	<i>Eldon, O.</i>
Percy Melvin Holdsworth, M.	56	<i>Traverse City.</i>

Frederick Ruthrauff Hoover, C.			<i>Kansas City, Mo.</i>
James LeGrand Horth,			<i>Geneva, N. Y.</i>
Edward Bishop House, E.	88		<i>Greeley, Col.</i>
Lewis Glasgow Howlett, E.	6		<i>Trinidad, Col.</i>
Edwin Delos Hoyt, M.	110		<i>Kinderhook.</i>
Edwin Adolphus Hughes, E.	39		<i>Elkhart, Ind.</i>
Henry McCollam Hunt, M.	15		<i>Chicago, Ill.</i>
Loomis Hutchinson, E.	67		<i>Ann Arbor.</i>
John William Irwin, C.	95		<i>Detroit.</i>
Hugh Calvin Jackson, C.	99		<i>New Castle, Pa.</i>
Ernest Hiram Jacobs, E.			<i>Owosso.</i>
Walter Henry Jennings, M.	23		<i>Detroit.</i>
James Dawson Johnson, M.	8		<i>Decatur, Ill.</i>
Eugene Berkey Jones, M.			<i>Grand Rapids.</i>
Albert Lincoln Jossman, E.			<i>Clarkston.</i>
Julius Kahn, C.	112		<i>Detroit.</i>
Albert Benjamin Kalmbach, M.	103		<i>Grand Rapids.</i>
John Blaine Keating, M.	64		<i>Helena, Mon.</i>
Hugh Braley Kelly, C.	111		<i>Elgin, Ill.</i>
Carl Sears Kennedy, C.	23		<i>Rockford, Ill.</i>
Charles Wolcott Kent, C.	5		<i>Kalamazoo.</i>
Frank Atherton Ketcham, M.	18		<i>Detroit.</i>
Carlyle Kittredge, E.	74		<i>Ann Arbor.</i>
Otto John Kralovec, C.	10		<i>Chicago, Ill.</i>
John Albert Kreis, Jr., M.	66		<i>Cincinnati, O.</i>
Charles Augustus LaFever, E.	24		<i>Battle Creek.</i>
Guy Thompson Lamont, M.	105		<i>Bay City.</i>
John Alexander Lamont, C.	50		<i>Detroit.</i>
Thomas Bassnett Lee, C.	104		<i>Coldwater.</i>
Frederick Ewbank Leefe, C.	29		<i>Sault Ste. Marie.</i>
Sydney Laurence Leefe, E.			<i>Sault Ste. Marie.</i>
Ora Miner Leland, C.	8		<i>Grand Haven.</i>
John Gurdon Lewis, E.	79		<i>Oak Park, Ill.</i>
William Lewis Love, C.	41		<i>Detroit.</i>
Ernest Lunn, E.			<i>Stanton.</i>
Guy Webster Lunn, E.			<i>Stanton.</i>
Arthur Eugene Maas, E.	32		<i>Negaunee.</i>
Alexander Few Maitland, E.			<i>Negaunee.</i>
Royal John Mansfield, C.	7		<i>Bay City.</i>
Carl Richard Marquardt, M.	99		<i>Mt. Clemens.</i>
Edward Potter Marsh, M.	43		<i>Chicago, Ill.</i>
Harry Blackmore Marsh,			<i>Dowagiac.</i>
Henry Stone Marsh, E.	8		<i>Detroit.</i>

William Jonathan Marsh,	E.	23	Pittsford, N. Y.
William Freeman Martin,	M.	74	Chicago, Ill.
Clyde Shelton Mason,	M.	101	Owosso.
Shigeru Matsuyama,	M.		Tokio, Japan.
Augustus Joseph Mayworm,	M.	8	Detroit.
William Keepers Maxwell,	E.	30	Dallas, Tex.
Thomas Durand McColl,	E.	99	Jackson.
George Thomas McGee,	C.	120	Jackson.
George Edward McKana,			Escanaba.
William Meek McKee,	E.	8	Chillicothe, O.
George Karr McMullen,	E.	96	Grand Rapids.
Frederick Atwood McVay,	E.	13	Sewickley, Pa.
William Potter McVay,	M.		Sewickley, Pa.
Howard B. Merrick,			Wrightstown, Pa.
Charles Oakes Merrill,	E.	23	Helena, Mon.
Herbert Woodruff Merrill,	M.	107	Saginaw, East Side.
William Lincoln Midgett,			Massillon, O.
William Edwin Minshall,	C.		Chillicothe, O.
John Harold Montgomery,	E.	67	Ann Arbor.
Henry Evans Moore,	C.	63	Saginaw, East Side.
Lyman Foote Morehouse,	E.	69	Big Rapids.
Charles John Holland Moritz,	E.	76	Saginaw, West Side.
William Raymond Morley,	C.	10	Datil, New Mexico.
John Theodore Mountain,	E.	6	Chicago, Ill.
George Kellogg Newbury,	M.	42	Jackson.
Claude George Newton,	C.	40	Ann Arbor.
Guy Dorick Newton,	M.	98	Ann Arbor.
Lee Luke Newton,	C.	100	Lake Linden.
Ralph Eells Newton,	E.	63	Saginaw, East Side.
†Samuel Frederick Nichols,			Beatrice, Neb.
James Tainter Noble,	E.	27	Rice Lake, Wis.
Casin Obert,	M.	8	Detroit.
Arthur Patrick O'Brien,	C.	74	Chicago, Ill.
Walter Howard O'Brien,	E.	102	Chicago, Ill.
Frank Joseph O'Donnell,	C.		Pittsburgh, Pa.
Fay DeVeaux Olmsted,	M.	47	Detroit.
Edwin Gale Osborn,	E.	68	Owosso.
Henry Bailey Otis,	E.	93	Chicago, Ill.
Ralph Hugh Page,	M.	18	Chicago, Ill.
Charles Gilbert Palmer,	E.	93	Detroit.
Lewis Merton Parrott,	E.	104	Mt. Clemens.
Roy Henry Parsons,	C.	49	Howell.
Will James Penhallegon,	E.		Calumet.

Joseph Perrien, B.S., <i>Mich.</i>		
<i>Agricultural College,</i>	M.	85 <i>Detroit.</i>
Joseph Herman Pettersch,	E.	39 <i>Grand Rapids.</i>
George Charles Pratt,	E.	64 <i>LaGrange, Ill.</i>
Charles Marvin Preston,	E.	12 <i>Detroit.</i>
Clifford Moses Pritchard,	C.	35 <i>Kokomo, Ind.</i>
Otto Pruessman,	E.	47 <i>Chicago, Ill.</i>
Edward Lewis Quarles,	C.	<i>Milwaukee, Wis.</i>
James Merton Raikes,	C.	103 <i>Burlington, Ia.</i>
Clarence Webster Raynor,	C.	28 <i>Adrian.</i>
A. Clare Reed,	C.	3 <i>Joliet, Ill.</i>
Ben Cornelius Rich,	C.	104 <i>Chicago, Ill.</i>
Ard Ezra Richardson,	M.	14 <i>Saginaw, East Side.</i>
John Frederick Rinsey,		<i>Ann Arbor.</i>
William Harrison Rippey,	C.	56 <i>Sturgis.</i>
Walter Robbins,	E.	94 <i>Marquette.</i>
Wellington Roberts,	C.	<i>Rosedale.</i>
David Nathaniel Rosen,	M.	8 <i>Muskegon.</i>
Herbert Lafayette Russell,	C.	35 <i>Ann Arbor.</i>
Edward James Ryan,	E.	84 <i>Detroit.</i>
Richard Edward Sack,	E.	104 <i>Detroit.</i>
Frank Vincent Sackett,	E.	34 <i>LaGrange, Ill.</i>
Frank Noble Savage,	C.	28 <i>Chicago, Ill.</i>
Sydney Eugene Sayles,	E.	2 <i>Ewart.</i>
Francis Joseph Seabolt,	M.	59 <i>Ann Arbor.</i>
Charles Gilchrist Simonds,	M.	61 <i>Schoolcraft.</i>
Weston Small,	C.	28 <i>Amboy, Ind.</i>
George William Smith,	C.	56 <i>Cheboygan.</i>
George Rollins Snover,	Min.	106 <i>Detroit.</i>
Muir Burtenshaw Snow,		<i>Detroit.</i>
Charles Henry Snyder,	M.	14 <i>Victor, N. Y.</i>
Frank Clement Soper,	E.	96 <i>Ypsilanti.</i>
Jay Wylder Spear,	C.	8 <i>Marquette.</i>
Charles Henry Spencer,	C.	98 <i>Ann Arbor.</i>
Clarence William Squier,	E.	46 <i>Ann Arbor.</i>
Bruce Rowley Starkweather,	E.	<i>Romeo.</i>
Charles Merritt Starr,		<i>Edwardsburg.</i>
James Thorpe St. Clair,	E.	33 <i>Ann Arbor.</i>
Will Theodore Stebbins,	E.	86 <i>Battle Creek.</i>
Robert Steck,	E.	48 <i>Chicago, Ill.</i>
Reginald Dewhurst Steele,	M.	10 <i>Wyandotte.</i>
Samuel Adolph Stein,	C.	12 <i>Chicago, Ill.</i>
Adrian Delano Stevenson,	E.	96 <i>West Point, Neb.</i>

Arthur Gilbert St. John,	C.	40
George Shapley Stone,	E.	
Claude Franklin Streeter,	C.	26
John Frederick Streib,	C.	41
Emil G. Struckman,	M.	26
Franklin Van Vechten Swan,	E.	10
George Welles Tanner,	E.	26
Clifford Ross Tatem,	E.	26
Mark Wayland Tenny,		
Cary Davis Terrill,	E.	
Claudius Horatio Thomas,	M.	
Raphael Thomas, Jr.,	M.	
John Eugene Thompson,	E.	
Warren Hamilton Thompson,	M.	
Foster David Tower,	E.	
Howard Platt Treadway,	C.	
Melvin Sutphin Trevidick,	E.	26
Frank Trott,	M.	
Die Hector Trowbridge,	M.	
Alexander George Unsold,	R.	
Frank R. Van Dusen,		
Robert Osborn Van Horn,	E.	
Sutton Van Pelt,	E.	
Charles Herbert Vaughan,		
Ph.B., Hillsdale College,	C.	
Frederick Elwood Vickroy,	E.	
Robert Voorhees Vincent,	C.	
Theodore Vlademiroff,	E.	
George Hill Wagner,		
James Max Wasson,		
William Ashley Wangh,		
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Albert Andrew Weber,		
Charles Delmar Welles,		
Charles Herman Webster,		
Ralph John Wells,		
Lavergn Levi Wheeler,		
Frank Scott Whillman,		
Clarence Wright Whitmore,		
Bertram DeWitt Williams,		
Frederick J. Wilbur,		
Roy Rodney Wilby,		

Henry Elmore Wilkinson,	E.	25	<i>Denison, Tex.</i>
Carl Benezette Williams,	C.	108	<i>Western Springs, Ill.</i>
Victor Roy Willoughby,	M.	99	<i>Ann Arbor.</i>
Arthur Bryant Wood,	E.		<i>Union City.</i>
Morey Aldrich Wood,	E.	37	<i>Battle Creek.</i>
Louis Albert Woodard,	M.	106	<i>Grand Rapids.</i>
Silas Hiram Woodard,	C.	108	<i>Potsdam, N. Y.</i>
Edward Joseph Woodhams,	E.		<i>Plainwell.</i>
Fay Woodmansee,	E.	62	<i>Ann Arbor.</i>
Edwin Francis Woodruff,	M.	102	<i>Ludington.</i>
Grover Henry Woods,	E.	95	<i>Macedon, N. Y.</i>
Walter Heman Woods,	E.	50	<i>Ann Arbor.</i>
Irving Charles Woodward,	M.	65	<i>Iron Mountain.</i>
Henry Lumsden Woolfenden,	E.		<i>Detroit.</i>
Charles Hartley Wright,	E.		<i>Hancock.</i>
Irving Wynkoop,			<i>Saugerties, N. Y.</i>

Department of Medicine and Surgery.

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ALBERT B. PRESCOTT, Ph.D., M.D.
WILLIAM J. HERDMAN, Ph.B., M.D.
VICTOR C. VAUGHAN, Ph.D., M.D., *Dean*.
CHARLES B. NANCREDE, A.M., M.D.
FLEMMING CARROW, M.D.
OTIS C. JOHNSON, Ph.C., A.M.
PAUL C. FREER, Ph.D., M.D.
JAMES N. MARTIN, Ph.M., M.D.
GEORGE DOCK, M.D.
WARREN P. LOMBARD, A.B., M.D.
ARTHUR R. CUSHNY, A.M., M.D.
J. PLAYFAIR McMURRICH, Ph.D.
FREDERICK G. NOVY, Sc.D., M.D.
G. CARL HUBER, M.D.
ALVISO B. STEVENS, Ph.C.
WILLIAM A. CAMPBELL, B.S., M.D., *Secretary*.
WILLIAM F. BREAKEY, M.D.
GEORGE O. HIGLEY, M.S.
SIMON M. YUTZY, M.D.
DAVID M. LICHTY, M.S.
FRANK W. NAGLER, B.S.
ALDRED S. WARTHIN, Ph.D., M.D.

MARSHALL D. EWELL, LL.D.,
Non-Resident Lecturer on Medical Jurisprudence.

Other Instructors, Demonstrators, and Assistants.

JAMES G. LYND, M.D.
CYRENUS G. DARLING, M.D.

CHARLES T. McCLINTOCK, Ph.D., M.D.
 JEANNE C. SOLIS, M.D.
 JOSEPH FOSTER, B.S., M.D.
 THEODORE L. CHADBOURNE, B.S., M.D.
 JOHN W. FOLEY, M.D.
 CARLTON D. MORRIS, M.D.
 SAMUEL A. MATTHEWS, M.D.
 CHARLES D'A. WRIGHT, M.D.
 CARLTON R. ROSE, Ph.B.
 ARTHUR H. JOHNSON, M.D.
 ROBERT MCGREGOR, M.D.
 *HERBERT O. STATLER, M.D.

STUDENTS.

RESIDENT GRADUATES.

NAME.	RESIDENCE.
Merritt Grant Bassett, M.D.,	<i>Ann Arbor.</i>
John Valentine Carroll, M.D., <i>University of</i> <i>New York,</i>	<i>Chinook, Mon.</i>
Walter Courtney, M.D.,	<i>Brainerd, Minn.</i>
Samuel Sullivan Cox, M.D., <i>Western Re-</i> <i>serve University,</i>	<i>Lorain, O.</i>
Charles Fremont Dight, M.D.,	<i>New Orleans, La.</i>
William Aaron George, M.D.,	<i>Battle Creek.</i>
Edward Alexander Andrew Grange, V.S., <i>Ontario College,</i>	<i>Agricultural College.</i>
Mary E. Pradt Harper, M.D., <i>Starling Med-</i> <i>ical College,</i>	<i>Madison, Wis.</i>
John Serbert Johnson, M.D.,	<i>Madison, S. Dak.</i>
Andrew Milton Miller, M.D.,	<i>Alpena.</i>
Joseph Adam Weitz, M.D.,	<i>Montpelier, O.</i>
Charles D'Abbs Wright, M.D.,	<i>Ann Arbor.</i>

FOURTH YEAR STUDENTS.

NAME.	RESIDENCE.
Frances Morton Allen, A.B., <i>Univ. of North</i> <i>Dakota,</i>	<i>Grand Forks, N. Dak</i>
Gardner Jabez Bigelow	<i>Sandusky, O.</i>
Chester Bradley Bliss,	<i>Springfield, O.</i>
Allen Lewis Borden,	<i>Fredonia, N. Y.</i>

* Appointed Assistant to the Professor of Obstetrics and Diseases of Women
 22 January, 1922

Frank Swift Bourns, B.S.,	<i>Ann Arbor.</i>
Charles Francis Boyden,	<i>Evansville, Ind.</i>
Joseph Brayshaw, B.S., <i>Pierce City Baptist</i>	
<i>College,</i>	<i>Plevna, Mo.</i>
J. Ernest Browne,	<i>Fowlerville.</i>
Arthur H. Burleson,	<i>Richland.</i>
Gertrude Dart Campbell,	<i>Mason.</i>
Charles Henry Carlin,	<i>Gloversville, N. Y.</i>
George Willis Clarke,	<i>Ovid.</i>
Sarah Ellen Conner,	<i>Utica.</i>
David Murray Cowie,	<i>Battle Creek.</i>
Galen Greenfield Crozier, B.S.,	<i>Ann Arbor.</i>
Arthur Victor Doud,	<i>Lyndonville, Vt.</i>
Thomas John Doughty,	<i>Beacon.</i>
Eleanora S. Everhard, B.S., <i>Ripon Coll.,</i>	
<i>A.M., ibid.,</i>	<i>Ripon, Wis.</i>
Penelope McNaughton Flett, A.B., <i>Vassar</i>	
<i>College,</i>	<i>Waverley, Mass.</i>
Gilbert Bird Furness,	<i>Ogdensburg, N. Y.</i>
Carrie Lilla Garlock,	<i>Ames, N. Y.</i>
Katherine Eliza Geiger,	<i>Ann Arbor.</i>
George Adam Geist,	<i>Detroit.</i>
Lawrence Chamberlain Grosh,	<i>Toledo, O.</i>
Theodore Charles Guenther,	<i>Sandusky, O.</i>
Charles William Hartloff, A.B., <i>Indiana</i>	
<i>University,</i>	<i>Evansville, Ind.</i>
Mary Cornelia Heilesen,	<i>Battle Creek.</i>
Frances Hulbert,	<i>Richardson, Wis.</i>
Charles Fremont Johnson,	<i>Milan.</i>
Charles Kahn,	<i>Joliet, Ill.</i>
Ida Kahn,	<i>Kiukiang, China.</i>
Samuel Michael Knoop, A.B., <i>Indiana</i>	
<i>University,</i>	<i>Claypool, Ind.</i>
Caspar K. Lahuis,	<i>Zeeland.</i>
James Joseph Lasalle,	<i>Toledo, O.</i>
Lucien Gex Locke,	<i>Wheelersburg, O.</i>
Minnora Sprague Marshall,	<i>Ann Arbor.</i>
David Porter Mayhew, Ph.B.,	<i>Detroit.</i>
Charles Samuel McIntyre,	<i>Woodland.</i>
Hiram Beach Morse,	<i>Sanilac Centre.</i>
Saxe Whittier Mowers, A.M., <i>Wabash Coll.,</i>	<i>La Fayette, Ind.</i>
Christian Peter Nelson,	<i>Battle Creek.</i>
Ethan A. Nevin,	<i>Helena, N. Y.</i>

Robert Henry Nichols,	<i>Chester.</i>
George Drinan Perkins,	<i>Bridgetown, Barbadoes.</i>
Anna Louise Preston,	<i>Marietta, O.</i>
Ernest Hinsdale Ryors,	<i>Ann Arbor.</i>
Homer Erwin Safford, Ph.B.,	<i>Plymouth.</i>
Murray Maywood Sears,	<i>Ann Arbor.</i>
Horace Watson Sherwood, B.S., <i>Fayette</i>	
<i>Normal Univ.,</i>	<i>Ann Arbor.</i>
Meiyii Shie [Mary Stone],	<i>Kiukiang, China.</i>
Clark Francis Tuomy,	<i>Ann Arbor.</i>
William Raymond Turner,	<i>Monroe.</i>
James Wallace Van Dusen,	<i>Cleveland, O.</i>
Frederick Thomas Van Urk,	<i>Kalamazoo.</i>
Mary Eloise Walker, A.B.,	<i>Old Mission.</i>
Francis Joseph Welsh, LL.B.,	<i>Ann Arbor.</i>
Charles Edward White,	<i>Rome, N. Y.</i>
John Zieg,	<i>Allegheny, Pa.</i>

THIRD YEAR STUDENTS.

NAME.	RESIDENCE.
Otto Carl Ahlers,	<i>Bellevue, Ia.</i>
Susan Anderson,	<i>Anaconda, Col.</i>
Frederick Amos Baldwin,	<i>Jackson.</i>
Harry Brown Britton,	<i>Dayton, O.</i>
Alice Crawford Brown, A.B., <i>Vassar Coll.,</i>	<i>Detroit.</i>
Hortense Valentine Bruce,	<i>Burnside.</i>
John Fletcher Byington, A.B.,	<i>Battle Creek.</i>
Mary Kate Byington, •	<i>Battle Creek.</i>
Dwight Calkins,	<i>Allegan.</i>
Claudius Bidleman Chapin, B.S., <i>Michigan</i>	
<i>Agr. Coll.,</i>	<i>Schoolcraft.</i>
Albert Ambler Church, A.B., <i>Oberlin Coll.,</i>	<i>Lansing.</i>
Abbott Lathrop Cooley,	<i>Ann Arbor.</i>
Arthur Samuel Cornell,	<i>West Flamboro, Ont.</i>
Mary Agnes Dangcl,	<i>Fort Jones, Cal.</i>
Hester Sophia Antoinette Davies,	<i>Battle Creek.</i>
Joseph Trower Davies,	<i>Battle Creek.</i>
William Grant Decker,	<i>Detroit.</i>
Herman Russell Dewey, Ph.M., <i>Hillsdale</i>	
<i>College,</i>	<i>Hillsdale.</i>
Stowell Barnard Dudley, Ph.B., <i>Oberlin</i>	
<i>College,</i>	<i>Oberlin, O.</i>
Edward Samuel Fogg,	<i>Shiloh, N. J.</i>

Orrin Henry Freeland,	Mason.
Darwin Spencer Gailey,	Ashland, Ill.
Neil Alexander Gates,	Ann Arbor.
Charles B. Gauss,	Palo.
Ralph Nevin Gorden,	Abilene, Kan.
Albert Culver Hammett,	Chicago, Ill.
Edward Palestine Hawkins,	Ann Arbor.
Carrie Mary Hayward,	Malden, Mass.
Rudolph Bernhard Hoermann, A.B., North-	
western Univ.,	Watertown, Wis.
George Aloysius Hofstetter,	St. Louis.
Mary Myrtle Pennington Hunter,	Battle Creek.
Howard Aiken Ijams, B.S., University of	
Tennessee,	Knoxville, Tenn.
Noah Harrison Jackson,	Ann Arbor.
Benjamin William Kelly,	Saginaw, East Side.
Cornelia Frances Kerr,	Ann Arbor.
John Henry Kincaid,	Knoxville, Tenn.
James Rollin Kingsley,	Ann Arbor.
Lewis Frank Ladd,	Brooklyn.
David Herman Lando,	St. Paul, Minn.
Frederick Percy Lawton,	Lawton.
Anna Willard Locke, A.B., Wellesley Coll.,	Nashua, N. H.
Homer Garrison Long,	Quaker City, O.
James Long,	Bryan, O.
William Beatty Lunn,	Pontiac.
John Albert Mapes, B.S., Olivet College,	Olivet.
Simon Samuel McKenzie,	Caledonia, N. Y.
Albert Beekman Mills,	Port Huron.
Morris Morrison,	Westby, Wis.
Frederick Lee Morse,	Lyons.
Hugh Morton Jolliffe Mulheron,	Detroit.
Edwin Harrington Musson,	Chillicothe, Mo.
Charles Hannibal Nims, A.B., Oberlin Coll.,	Sand Beach.
Norman Perkins Nims,	Monroe.
Marion Nute,	Boston, Mass.
Charles Stanton Olinger,	Grand Rapids.
Carlin Philips,	Ann Arbor.
Ferdinand Henry Pirnat,	Evansville, Ind.
George Hampton Putney,	Ionia.
John Jay Ratcliffe,	Waukon, Ia.
Arthur Patrick Rooney,	Horton, Kan.
Jessie Fremont Ruby, A. B.,	Union City, Ind.

Henry Christian Schoepfle,	<i>Sandusky, O.</i>
Ida May Shively,	<i>Battle Creek.</i>
Edmund Alfred Sizer,	<i>Kankakee, Ill.</i>
Arthur Julius Skeel,	<i>Cleveland, O.</i>
Raymond Duane Sleight,	<i>Laingsburg.</i>
Georgia Smeallie, B.L., B.S.,	<i>Independence, Ia.</i>
Paul Smits,	<i>Zeeland.</i>
William Albert Spitzley, A.B.,	<i>Detroit.</i>
Isaac Franklin Steiner,	<i>Bluffton, O.</i>
Willard Stiles Stevens,	<i>Evansville, Wis.</i>
John Benjamin Thielen,	<i>Gorham, N. Y.</i>
Harry Isaac Van Tuyl, B. S.,	<i>Ypsilanti.</i>
George Barclay Wallace,	<i>Portland, Ore.</i>
Harry Clark Watkins,	<i>Norvell.</i>
Arthur Eddy West,	<i>Eaton Rapids.</i>
Mary Wetmore,	<i>Allegan.</i>
Jean Calista Whitney,	<i>Battle Creek.</i>
Edward Peyton Wilbur,	<i>Kalamazoo.</i>
Robert Dwight Wilson,	<i>Medway, Mass.</i>
William Henry Witter,	<i>Bucyrus, O.</i>
James Rupert Wolfenden, B. S.,	<i>Chicago, Ill.</i>
Carrie Jane Young,	<i>Parma.</i>
Alois Lawrence Ziliak,	<i>Haubstadt, Ind.</i>

The following student, enrolled in the Department of Literature, Science, and the Arts, is also pursuing studies as third year student in the Department of Medicine and Surgery.

Charles Chesterfield Nicola, *Battle Creek.*

SECOND YEAR STUDENTS.

NAME.	RESIDENCE.
Helen Emelia Affeld,	<i>Chicago, Ill.</i>
John William Amesse,	<i>Lake Linden.</i>
Howard Bigelow Baker, B.S., <i>Michigan</i> <i>Agricultural College,</i>	<i>Lansing.</i>
Mortimer Dellville Barney,	<i>Chillicothe, Mo.</i>
James Hutchinson Bartley, B.S., <i>Albion</i> <i>College,</i>	<i>Albion.</i>
Robert Barbour Bell,	<i>Toronto, Ont.</i>
Carrie Elizabeth Bing,	<i>Delaware, O.</i>
Charles Frederick Browne,	<i>Kalamazoo.</i>
Howard Russell Bryson,	<i>Watsonstown, Pa.</i>
Minnie Burnham,	<i>Macomb, Ill.</i>
Thomas Stone Burr, A.B., <i>Bowdoin Coll.,</i>	<i>Bangor, Me.</i>

Leo Louis Cahill,	Mendon.
Ellen Rose Canney,	New Bedford, Mass.
Eugene R. Carpenter,	Knobnoster, Mo.
Bert Mather Carr,	Cedar Springs.
Charles Arthur Cattermole,	Fort Madison, Ia.
Loretta Katherine Cavanaugh,	New Bedford, Mass.
Edwin M. Chauncey,	Girard.
Yung Peng Cheng,	Canton, China.
Carrie Simpson Coleman,	Centre, Ind.
Clarendon James Combs,	Elmira.
Norton Dusenbury Coons,	Mt. Pleasant.
Alexander Corpron,	Strathroy, Ont.
John De Lamater Covert,	Brooklyn.
John Martin Craig,	Battle Creek.
Kate Louise Crawford,	Ann Arbor.
Samuel Conway Crow,	Glenfield, Pa.
Thomas Levi Dagg,	West Bay City.
Charles Elbert Davis,	Woodward, O.
†Lydia Maria DeWitt,	Dexter.
Hugh William Dicken,	Romeo.
Fred Strayer Diefendorf,	Canajoharie, N. Y.
Victor Charles Doherty,	Clare.
Myron La Fayette Downs, A.B.,	Chicago, Ill.
Mary Victoria Dryden,	Battle Creek.
Fannie Almara Dunn,	Bismarck, N. Dak.
Lucy Nash Eames, B.S.,	Ann Arbor.
George Oliver Evans,	Pittsburgh, Pa.
George Charles Fisher,	Centreville.
John Edwin Froom,	Battle Creek.
George Ernest Fuller, Ph.B., <i>Alfred Univ.</i> ,	Richburg, N. Y.
Arthur Ernest Gale,	Haverhill, Mass.
Henry Bennett Gammon, A.B.,	Creston, Ill.
Thomas Gilvere,	Bement, Ill.
Clarence Allen Good,	Richfield.
Newton Henry Greenman,	Decatur.
Ovidus Arthur Griffin, B.S., <i>Fayette Normal</i>	
<i>University,</i>	Toledo, O.
Fred Hopkins Harris,	Coldwater.
Corydon Ford Heard,	North East, Pa.
Glenn Henley,	Fairmount, Ind.
Edward James Hobbs,	Battle Creek.
Park Howell,	Atlanta, Ga.
Alva Rufus Hull,	New Sharon, Ia.

Robert Stephenson Ingersoll,	<i>West Olive.</i>
William S. Jackson,	<i>Muskegon.</i>
Andreas Johannes,	<i>Ann Arbor.</i>
Adelbiert Allen John,	<i>Battle Creek.</i>
Joseph Alphonsis Kelly,	<i>Ann Arbor.</i>
LeRoy Wendell King,	<i>Rome, N. Y.</i>
William David Kinney,	<i>Battle Creek.</i>
Mark Stevens Knapp, B.S.,	<i>Fenton.</i>
Will Mac Lake,	<i>Saginaw, East Side.</i>
Solomon S. Lee,	<i>Lowell.</i>
Wilmer Sanford Lehman,	<i>Edison, Neb.</i>
William James Little, A.B., <i>Hastings</i>	
<i>College,</i>	<i>Madison, Neb.</i>
George Munroe Livingston,	<i>Cass City.</i>
Nelson Ferguson McClinton,	<i>Alma.</i>
Willard Monfort,	<i>Ithaca.</i>
Bert A. Mount,	<i>Springport.</i>
Harvey Lionel Morris,	<i>Vassar.</i>
Mary Josephine Nachtrieb,	<i>Nathrop, Col.</i>
May Fonda Nadeau,	<i>Seattle, Wash.</i>
George Henry Norris,	<i>Port Huron.</i>
Albert Patrick O'Leary,	<i>The Dalles, Ore.</i>
James Willis Parker, A.B.,	<i>Grand Blanc.</i>
John Leon Parker,	<i>Charles City, Ia.</i>
Olive Grace Perry,	<i>Ann Arbor.</i>
Ernest Reginald Pike,	<i>Abington, Conn.</i>
Arthur David Pollock,	<i>Macomb, Ill.</i>
Henry Bertram Potter,	<i>Providence, R. I.</i>
Albert Josiah Read,	<i>Battle Creek.</i>
Michael Joseph Rogers,	<i>Chicago, Ill.</i>
Joseph Crocker Scarborough,	<i>Ann Arbor.</i>
Bruno Lyonel Schuster,	<i>Milwaukee, Wis.</i>
Henry Mortimer Senter,	<i>Houghton.</i>
Frank Joseph Sexton,	<i>Brockton, Mass.</i>
Daniel Gilmore Simpson, A.B., <i>Grove City</i>	
<i>College,</i>	<i>Grove City, Pa.</i>
Annie Margaret Stevens,	<i>Farmington, Me.</i>
Abraham Franklin Strickler,	<i>Ann Arbor.</i>
Harry Warner Stuckey,	<i>Ann Arbor.</i>
William Henry Tefft,	<i>Hastings.</i>
Sharon John Thoms,	<i>Three Rivers.</i>
Herbert Lyman Underwood,	<i>Jamestown, N. Y.</i>
Christian Van der Veen,	<i>Grand Rapids.</i>

George Andrew Van Fradenburg,	<i>Liberty, N. Y.</i>
Thomas Van Urk,	<i>Kalamazoo.</i>
Ernest Maxwell Vardon,	<i>Hillsdale.</i>
Clarence Godfrey Vary,	<i>Battle Creek.</i>
Silvio Henry Karl von Ruck,	<i>Asheville, N. C.</i>
Herbert Harold Waite, A.B., <i>Amherst</i>	
<i>College,</i>	<i>Asheville, N. C.</i>
Walter Millar Warren,	<i>Chateaugay, N. Y.</i>
William Isaac Whitaker,	<i>Chelsea.</i>
Charles Henry Williams, Ph.B., <i>Adrian</i>	
<i>College, Ph.C.,</i>	<i>Adrian.</i>
Leroy John Wisman,	<i>Frontier.</i>
John Walter Wright,	<i>North Aurelius.</i>
John Oloff Zellen,	<i>Skaneec.</i>
Joseph Edward Ziliak,	<i>Haubstadt, Ind.</i>

The following students, enrolled in the Department of Literature, Science, and the Arts, are also pursuing studies as second year students in the Department of Medicine and Surgery.

NAME.	RESIDENCE.
Henry William Charles Bodecker,	<i>New York, N. Y.</i>
Rufus Ivory Cole,	<i>Peru, Ill.</i>

FIRST YEAR STUDENTS.

NAME.	RESIDENCE.
Florence Elizabeth Allen,	<i>Rochester, N. Y.</i>
Miranda May Allen,	<i>Rochester, N. Y.</i>
Augustus Patrick Apel,	<i>Detroit.</i>
Arthur Albert Baker,	<i>Woodville.</i>
Alfred Wickham Balsley,	<i>Findlay, O.</i>
Constantine Clinton Barnett,	<i>Petoskey.</i>
Charles Wallace Bassett,	<i>Utica, N. Y.</i>
Adelbert Nathan Bauder,	<i>Fort Plain, N. Y.</i>
George Herschael Beach,	<i>Fargo, N. Dak.</i>
Lester Hayes Beals, A.B.,	<i>Grand Blanc.</i>
Lena Adell Benjamin,	<i>Bradford, Pa.</i>
Frank Eugene Bennett,	<i>Battle Creek.</i>
Harmon Edward Boice,	<i>Byron.</i>
Philip Daggett Bourland, B.S.,	<i>Peoria, Ill.</i>
Samuel Robert Boyce, Ph.C.,	<i>Brooklyn.</i>
Fred Ellsworth Bradfield,	<i>Grand Rapids.</i>
Joel Packard Bradford,	<i>Battle Creek.</i>
Isabel Agnes Bradley,	<i>Akron, O.</i>
Jeannette Marshall Brigham,	<i>Howell.</i>
Frederick Wallen Brown,	<i>Hillsdale.</i>

Robert Clayton Buck,	<i>St. Johns.</i>
Christian E. Burkholder,	<i>Delphi, Ind.</i>
John Everett Burnette,	<i>Putnam, Conn.</i>
Blanche Morton Butler,	<i>Ann Arbor.</i>
James Francis Canavan,	<i>Holyoke, Mass.</i>
Harry Franklin Carver,	<i>McEwensville, Pa.</i>
John Andrew Cashel,	<i>Arcadia, Wis.</i>
Daniel George Castell,	<i>Pontiac.</i>
Alfred Newton Chamberlin	<i>Decatur.</i>
Oscar Elias Chase,	<i>Traverse City.</i>
Charles Glenn Church,	<i>Marysville, O.</i>
Clarence George Clark,	<i>Ann Arbor.</i>
John Edmund Clark,	<i>Traverse City.</i>
Elliott Mason Clarke,	<i>Hope Valley, R. I.</i>
Dick Clippinger, A.B., <i>Kenyon College,</i>	<i>Gambier, O.</i>
Henry Lee Cone,	<i>Battle Creek.</i>
Mary Louise Cook,	<i>New York, N. Y.</i>
Willis Gurdon Cook,	<i>Grand Blanc.</i>
Harold Dunbar Corbusier,	<i>Ann Arbor.</i>
Charles Culver,	<i>Howell.</i>
William R. Cunningham,	<i>Grove City, Pa.</i>
Louisa Mary Dithridge,	<i>New York, N. Y.</i>
William Ezra Doty,	<i>Ionia.</i>
Amos Driver,	<i>Carrollton, Ill.</i>
William Sylvio Durand,	<i>Champion.</i>
Omar J. East,	<i>Vandalia.</i>
Jonathan David Evans,	<i>Boston, Ind.</i>
Hattie Laura Ewing,	<i>Louisville, Ky.</i>
Robert Carlton Faulds,	<i>Menominee.</i>
David Fleischhauer,	<i>Reed City.</i>
Albert Douglas Foster,	<i>Detroit.</i>
Raynor Spalding Freund,	<i>Butte, Mon.</i>
Ray Thomas Fuller,	<i>Carson City.</i>
Milton Lowrie Glenn,	<i>Crawford Corners, Pa.</i>
Alfred George Goll,	<i>Stryker, O.</i>
James Gostanian,	<i>Campello, Mass.</i>
Frank Davis Gray,	<i>Boice, N. Y.</i>
Henry Alexander Grant,	<i>Marquette.</i>
Henry Ward Beecher Greene,	<i>Burke, N. Y.</i>
George Frank Greenleaf, Jr.,	<i>Chicago, Ill.</i>
Robert McKay Greenshields,	<i>Romeo.</i>
Elmo Walter Griffin,	<i>Saginaw, East Side</i>
James Hagan,	<i>Ann Arbor.</i>

Arthur Lee Hägler,	<i>Springfield, Ill.</i>
William Page Harlow,	<i>Decatur.</i>
Charles L. Harpham,	<i>Quincy.</i>
Downey Lamar Harris,	<i>Franklin, Ky.</i>
Otis Madison Hayward,	<i>Battle Creek.</i>
Irma Irene Heller,	<i>Fremont, Ind.</i>
Nils Hellesnaes,	<i>Voss, Norway.</i>
William Eugene Helm,	<i>Dundee, Ill.</i>
Levi St. John Hely,	<i>Borden, Cal.</i>
Louie Moffat Henderson,	<i>St. Johns.</i>
Anna Mae Henry,	<i>Pattonsburg, Mo.</i>
Fannie Jae Henry,	<i>Pattonsburg, Mo.</i>
Arthur Gilbert Holbrook,	<i>Coldwater.</i>
Charles Morton Hosmer,	<i>Maryville, Mo.</i>
Willard Hunter Hutchings, B.L.,	<i>Leslie.</i>
Arthur Dudley Jackson,	<i>Chicago, Ill.</i>
Susan Baxter Jarrett,	<i>Quincy, Ill.</i>
William Witry Jungels,	<i>Dubuque, Ia.</i>
John Joslyn Kelley,	<i>Sturgis.</i>
Orson Arza Kellogg,	<i>Alden, Ia.</i>
Fred M. Kelly,	<i>Santa Ana, Cal.</i>
Herbert Elias Kelly,	<i>Monroe.</i>
Frank Cornelius Kennedy,	<i>Ishpeming.</i>
William Newton Kenzie,	<i>Battle Creek.</i>
John Victor Keogh,	<i>Dubuque, Ia.</i>
Clarence Rollin LaBier,	<i>Battle Creek.</i>
William Jordan Lakey,	<i>Chicago, Ill.</i>
Simon Levin,	<i>Michigamme.</i>
Eugene Richards Lewis,	<i>Dubuque, Ia.</i>
Charles Loughnane,	<i>Lapeer.</i>
Dionysius Joseph Lowney,	<i>New Bedford, Mass.</i>
Cabot Lull, Jr.,	<i>Pontiac.</i>
Theodore Charles Lyster,	<i>Detroit.</i>
Jesse Krekore Marden, A.B., <i>Dartmouth</i>	
<i>College,</i>	<i>New Boston, N. H.</i>
Jackson Lee Martin,	<i>Battle Creek.</i>
Maud Ethelyn Martin,	<i>Battle Creek.</i>
Elihu Arthur Martindale, Ph.B., <i>Hillsdale</i>	
<i>College,</i>	<i>Hillsdale.</i>
John Edward Mason,	<i>Chesterville, Ind.</i>
William Hampton Matchett,	<i>Ann Arbor.</i>
Mary May McArthur,	<i>Cheboygan.</i>
C. Fenwick McDowell,	<i>Wesley, Pa.</i>

James William McEwan,	<i>Detroit.</i>
Mary Crouse McKibbin,	<i>McKeesport, Pa.</i>
Clarence Warren Mehlhop,	<i>Dubuque, Ia.</i>
John Josiah Mersen, A.B., <i>Hope College,</i>	<i>Holland.</i>
George Farnsworth Mooney,	<i>Austinburg, O.</i>
†Harry E. Moore,	<i>Ypsilanti.</i>
Thomas Kenney Moore,	<i>Lima, O.</i>
William Robert Morrison,	<i>Corunna, Ont.</i>
Martin Alvin Mortensen,	<i>Battle Creek.</i>
William Daniel Mueller,	<i>Muskegon.</i>
Horace Newhart, A.B., <i>Dartmouth Coll.,</i>	<i>New Ulm, Minn.</i>
Burton Walter Oliver,	<i>Kalamazoo.</i>
Hiram Winnett Orr,	<i>West Newton, Pa.</i>
Jesse Obed Parker,	<i>Mt. Pleasant.</i>
Guy Payne,	<i>West Walworth, N. Y.</i>
Thomas Leroy Peacock,	<i>West Sebewa.</i>
Emma Pearson,	<i>Van Wert, O.</i>
Harvey Newton Peck, B.S., <i>Michigan</i>	
<i>Agricultural College,</i>	<i>Jackson.</i>
Samuel Wesley Perry,	<i>New Castle, Pa.</i>
Ralph Alvin Peters,	<i>Geneseo, Ill.</i>
Hiram Dewey Peterson,	<i>Huron, O.</i>
John Ross Petty,	<i>Fenton.</i>
Eben Douglas Pierce,	<i>Arcadia, Wis.</i>
Harry Melvin Piper,	<i>Denver, Ind.</i>
Charles Banning Porter,	<i>Tonica, Ill.</i>
William Gilbert Povey,	<i>Detroit.</i>
Dwight Centennial Powell,	<i>Logansport, Ind.</i>
Frank Paine Ramsey, Ph.G., <i>College of</i>	
<i>Pharmacy of Northern Indiana,</i>	<i>Delta, O.</i>
Charles Ransom Reynolds,	<i>Elmira, N. Y.</i>
William Bernard Richmond,	<i>Ann Arbor.</i>
Elizabeth Pond Rindlaub,	<i>Platteville, Wis.</i>
Francis Cutter Rinkle,	<i>Boonville, N. Y.</i>
Georgia Oriana Robertson,	<i>Jewell, Kan.</i>
Alexander Jan Schilstra,	<i>Kalamazoo.</i>
Samuel Schultz, Ph.B., <i>Albion Coll.,</i>	<i>Lansing.</i>
†Arthur Walker Schurtz,	<i>Goshen, Ind.</i>
Frances Albert Scott,	<i>Brown City.</i>
Joseph Pearle Searle,	<i>Fairmount, Ind.</i>
Burt Granville Snow,	<i>Manistique.</i>
Alice Gray Snyder,	<i>Coshocton, O.</i>
Herbert Warren Stoughton,	<i>Chaiteaugdy, N. Y.</i>

Archie Adelbert Swinton, B.S., *Ohvet*

College,

Szymon Szudrawski,

Clarence Wilbur Taylor,

John Jay Taylor,

Maurice Hume Taylor,

Griffith Arthur Thomas,

Dean Orton Thompson,

Gay F. Tidyman,

Benjamin Rush Bradford Townsend,

John William Trask,

John Layton Tuttle, Jr.,

Edward Camillo Van DeWalker,

Paul Van Riper,

Aart Van Westrienen,

Felicia von Autenried,

James Lawson Walsh,

Frank Wasielewski,

Horace Houghton Waters, Ph.C.,

Alanson Weeks,

Charles Edward Wehrle,

Carroll Battles Welton,

Hallett Eugene West,

Mary Blanch White,

Reid A. White,

Ross Chauncey Whitman, A.B.,

William Carrell Wilkinson,

Alden Humphrey Williams,

Leroy Alvin Wilson,

Charles Martin Wood,

John Edward Worden,

Johnston Arthur Yeager,

George Frank Young,

Calumet.

Warsaw, Russia.

Duluth, Minn.

Ansonia, Conn.

Geneseo, Ill.

Wyandotte.

Randolph, N. Y.

Waupun, Wis.

New Brighton, Pa.

Bay City.

Clinton.

Baldwin.

Niles.

Grand Haven.

New York, N. Y.

Bay City.

Bay City.

Monroe.

Allegan.

Toledo, O.

Detroit.

Eaton Rapids.

Chicago, Ill.

Brooklyn.

Ann Arbor.

Romeo.

Montrose, Pa.

LaPorte, Ind.

Martin's Ferry, O.

Tacoma, Wash.

Archbold, O.

Paw Paw.

The following students, enrolled in the Department of Literature, Science, and the Arts, are also pursuing studies as first year students in the Department of Medicine and Surgery:

NAME.

RESIDENCE.

Roy Bishop Canfield,

Ann Arbor.

George Ernest Frazer,

Monroe.

Conrad Georg,

Ann Arbor.

Isadore Leon Hill,

Detroit.

William August Mogk,

Ann Arbor.

Floyd Hamilton Randall,

West Bay City.

Allen Frank Rockwell,	<i>Chelsea.</i>
Wesley Ewing Taylor,	<i>Wheelersburg, O.</i>
George Tupper,	<i>Kaneville, Ill.</i>

The following students, enrolled in the School of Pharmacy, are also pursuing studies as first year students in the Department of Medicine and Surgery:

NAME.	RESIDENCE.
Harry Theophilus Smith,	<i>Vincent, Pa.</i>
Edward Chancey Worden,	<i>Ypsilanti.</i>

Department of Law.

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WALTER D. SMITH, LL.B.

THOMAS M. COOLEY, LL.D.,
Lecturer on the Law of Interstate Commerce.
MARSHALL D. EWELL, LL.D.,
Non-Resident Lecturer on Medical Jurisprudence.
JAMES L. HIGH, LL.D.,
Non-Resident Lecturer on Injunctions and Receivers.
JOHN B. CLAYBERG, LL.B.,
Non-Resident Lecturer on Mining Law.
VICTOR C. VAUGHAN, Ph.D., M.D.,
Lecturer on Toxicology in its Legal Relations.
MELVILLE M. BIGELOW, Ph.D.,
Non-Resident Lecturer on Insurance.
HENRY C. ADAMS, Ph.D.,
Lecturer on the Railroad Problem.
ANDREW C. McLAUGHLIN, A.B., LL.B.,
Lecturer on Constitutional Law and Constitutional History.

RICHARD HUDSON, A.M.,
Lecturer on Comparative Constitutional Law.
 HENRY H. SWAN, A.M.,
Non-Resident Lecturer on Admiralty Law.
 CLARENCE L. MEADER, A.B.,
Lecturer on Roman Law.
 FRANK F. REED, A.B.,
Non-Resident Lecturer on Copyright Law.
 ALBERT H. WALKER, LL.B.,
Non-Resident Lecturer on Patent Law.

STUDENTS.

RESIDENT GRADUATES.

NAME.	RESIDENCE.
Frank Warren Ballenger, LL.B.,	<i>Flint.</i>
Joseph Edward Bland, LL.B.,	<i>Detroit.</i>
Anne Balfour Butler, LL.B.,	<i>Newton, Kan.</i>
Charles David Cary, LL.B.,	<i>Rantoul, Ill.</i>
Charles Erehart Chadman, LL.B.,	<i>Ann Arbor.</i>
William Alexander Coutts, LL.B.,	<i>Chatham, Ont.</i>
Daniel Abraham Edwards, LL.B.,	<i>Ann Arbor.</i>
John Wilber Gillespie, LL.B.,	<i>Pontiac.</i>
Louis Heaton Hanna, LL.B.,	<i>Monmouth, Ill.</i>
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Torazo Kikuchi, LL.B.,	<i>Tokio, Japan.</i>
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Charles McDonald Showalter, LL.B., *Ann Arbor*
 Robert Thompson, LL.B., *Ohio Normal*
University, *Malvern, O.*
 James Edward Wert, B.S., *Ohio Normal*
University, LL.B., ibid., *Lemert, O.*

SENIORS.

NAME.	RESIDENCE
Joseph Marion Adams,	<i>Ogden, Utah.</i>
Nathan Gilbert Aldrich,	<i>West Milton, O.</i>
Clay Hayward Alexander,	<i>Topeka, Kan.</i>
William Brown Anderson,	<i>Claysville, Pa.</i>
William Hamilton Anderson, B.S., <i>Black-</i>	
<i>burn University,</i>	<i>Carlinville, Ill.</i>
William Tudor Apmadoc,	<i>Chicago, Ill.</i>
John Benjamin Archer, A.B., <i>Williams Coll.,</i>	<i>North Adams, Mass.</i>
James Dell Armstrong,	<i>Lima, O.</i>
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William Stockton Bigger,	<i>Allegheny, Pa.</i>
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Frank William Boss,	<i>Plymouth, Ind.</i>
Clarence Leslie Bradley,	<i>Battle Creek.</i>
James Congdell Fargo Bradley,	<i>Hinsdale, Ill.</i>
Bret Harte Brooks,	<i>Hart.</i>

-
- Charles Le Mont Brooks,
 John Birt Brooks, A.B.,
 Charles Herman Brower,
 J. Earle Brown,
 Chester Groves Browne,
 Ernest Labon Bullen,
 Franklin Elisha Bump,
 Thomas Jefferson Butler,
 Leo Martin Butzel, Ph.B.,
 William Charles Cadwallader, B.S., *Olivet
College*,
 Luther Eugene Campbell, Jr.,
 Fred Littleton Canine,
 Claude Silas Carney,
 Charles Edwin Carter,
 William Carveth,
 Charles Roland Cary,
 William Rock Chambers, B.L., *Univ. of
Illinois*,
 Martin Samuel Chandler,
 George Albert Chapman,
 Edme Vincent Chassaing,
 Hugh Crawford Chedester,
 Dwight Bissell Cheever, B.S.,
 Dell Walton Clark,
 George Halbash Clementson,
 Harry Burnham Coffield,
 Charles Albert Compton, A.B., *Central
Normal College*,
 Henry Arnold Conlin,
 Henry William Conner,
 Michael Francis Conry,
 Clayton Thurston Cook,
 Wirt Arthur Cook,
 Edwin Scott Coombs,
 Roy J. Covert,
 John Coleman Crapser,
 Orien S. Cross,
 Harry Knox Crow,
 John Cobaugh Davies,
 Benjamin Franklin Deahl,
 Edwin Denby,
 Arthur Wilkins De Selm,
- Superior, Wis.*
Ann Arbor.
Roann, Ind.
Lansing.
Anderson, Ind.
Grand Rapids.
Wausau, Wis.
Detroit.
Detroit.

Gull Lake.
Kalamazoo.
Wolcott, Ind.
Schoolcraft.
California, Pa.
Middleville.
Detroit.

Sadorus, Ill.
Red Wing, Minn.
Hudson.
St. Louis, Mo.
Asheville, N. C.
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Leonardsville, N. Y.
Braddock, Pa.
Mendon, N. Y.

Toledo, O.
Dexter.
Knoxville, Tenn.
Shenandoah, Pa.
Owosso.
Saline.
Carthage, Ill.
Ithaca.
Waddington, N. Y.
Paw Paw.
Cumberland, O.
Johnstown, Pa.
Goshen, Ind.
Detroit.
Kankakee, Ill.

Courtney W. Dice,	<i>Veedersburg, Ind.</i>
David Leo Dillon,	<i>Paw Paw.</i>
William Paul Distler,	<i>Peoria, Ill.</i>
Erie Humphrey Dixon,	<i>Cincinnati, O.</i>
William Frederick Dodsley,	<i>Ann Arbor.</i>
Harry Doerr,	<i>Johnstown, Pa.</i>
Clarence Vincent Donovan,	<i>Fort Covington, N. Y.</i>
Walter Wendell Drew, A.B.,	<i>Grand Rapids.</i>
Albert Eusebius Dunning,	<i>Byesville, O.</i>
Halbert Myron Eggleston,	<i>Ann Arbor.</i>
Lewis Benjamin Ely,	<i>St. Louis, Mo.</i>
Harry Oliver Evans, A.B.,	<i>Pittsburgh, Pa.</i>
Fred Ross Everett,	<i>Ovid.</i>
David Shelby Ewing,	<i>Fresno, Cal.</i>
Albert John Farrah,	<i>Adrian.</i>
Edward Stewart Ferry,	<i>Muskegon.</i>
Luther Martin Fisher,	<i>Eugene, Ore.</i>
Norman Flowers,	<i>Detroit.</i>
Reuben Ayres Fogg,	<i>Shiloh, N. J.</i>
Delbert E. Ford,	<i>Chicago, Ill.</i>
Charles Woodworth Foster, B.L.,	<i>Lansing.</i>
Frank Davis Fox,	<i>Oxford, Pa.</i>
Chester Fritshaw,	<i>Ypsilanti.</i>
Ephraim Frost,	<i>Leonidas.</i>
Benjamin Andrew Gage,	<i>Cleveland, O.</i>
Fred Howard Gaston,	<i>Des Moines, Ia.</i>
Frank Gilman Gilland,	<i>Ann Arbor.</i>
David Moore Glascock,	<i>Washington Court House, O.</i>
Clayton Spencer Goodwin,	<i>Ann Arbor.</i>
Joseph Henry Gosnell,	<i>West Superior, Wis.</i>
Jesse Howard Green,	<i>Battle Creek.</i>
Charles A. Gridley,	<i>Virginia, Ill.</i>
Warren W. Guthrie, Jr., A.B., <i>Yale Univ.</i> ,	<i>Atchison, Kan.</i>
Edward George Hackney,	<i>Mt. Morris.</i>
Ralph D. Haley,	<i>South Rockwood.</i>
Edgar Louis Hall,	<i>De Witt, Ia.</i>
Forrest Maynard Hall,	<i>Jackson Centre, O.</i>
Roy Faris Hall,	<i>Tuscola, Ill.</i>
Laurence Rankin Hamblen,	<i>Spokane, Wash.</i>
Arthur Killiam Hardy, B.S., <i>Knox Coll.</i> ,	<i>Abingdon, Ill.</i>
*William Russell Hardy,	<i>Abingdon, Ill.</i>
Francis A. Harper,	<i>Champion.</i>

* Deceased

Edmund Rice Harrington,	<i>Port Huron.</i>
John Truesdale Harrington, A.B., <i>Oberlin College,</i>	<i>Jefferson, O.</i>
Artemas Everett Harris, B.S., <i>Napa Coll.,</i>	<i>Dayton, Nev.</i>
Lawrence Thomas Harris, A.B., <i>University of Oregon,</i>	<i>Eugene, Ore.</i>
George Blair Harrison,	<i>Topeka, Kan.</i>
John Wilson Hart,	<i>Sierra Madre, Cal.</i>
Burton Eugene Hathaway, B.S., <i>Hiram College,</i>	<i>Cleveland, O.</i>
Harry Gurley Hay,	<i>Cheyenne, Wyo.</i>
John Longworth Heffernan,	<i>Marquette.</i>
Franklin Carlisle Hodgkinson,	<i>Pittsburgh, Pa.</i>
John Willis Hollister, A.B., <i>Williams Coll.,</i>	<i>Cambridge, N. Y.</i>
Joseph Anthony Holpuch,	<i>Chicago, Ill.</i>
Franklin Hiram Holzheimer,	<i>Salt Lake City, Utah.</i>
Alvah Stanton Hopkins,	<i>Chicago, Ill.</i>
Harry Theodore Huber,	<i>Champion.</i>
Harry Milton Huff,	<i>Gobleville.</i>
Daniel Recse Hughes,	<i>Bevier, Mo.</i>
James Torrence Hughes,	<i>Latrobe, Pa.</i>
Kent Worley Hughes,	<i>Lima, O.</i>
Frederick Dominick Hunker, A.M., <i>St. Francis Coll.,</i>	<i>West Point, Neb.</i>
Alfred Hatch Hunt, A.B.,	<i>Grand Rapids.</i>
Albert August Huseman,	<i>Cincinnati, O.</i>
Robert Erskine Hutchison,	<i>Zwingle, Ia.</i>
Fred Lewis Ingraham,	<i>Azalia.</i>
Howard Alfred Jackson,	<i>West Middlesex, Pa.</i>
Logan Forrest Jackson,	<i>Nebraska City, Neb.</i>
Albert Hutchinson Jarman,	<i>San Jose, Cal.</i>
John Franklin Jewell,	<i>Galena, Ill.</i>
Lynn Myrton Johnston, A.B.,	<i>Romeo.</i>
Clarence Allen Jones,	<i>Tuscola, Ill.</i>
Joseph Dean Jones,	<i>Provo, Utah.</i>
Philemon Swinehart Karshner,	<i>Adelphi, O.</i>
Clarence Clay Kelly,	<i>Knobnoster, Mo.</i>
George Hamilton Kelly,	<i>Knobnoster, Mo.</i>
George Patterson Kelly,	<i>Santa Ana, Cal.</i>
Will Henry Kelly,	<i>Cheyenne, Wyo.</i>
James Daniel Kennedy,	<i>Bay City.</i>
Nathaniel Hall Kennedy,	<i>Jackson.</i>
William Wallace Kerr,	<i>La Porte, Ind.</i>

Louis Klingel, B.L., <i>Univ. of Illinois,</i>	<i>Mascoutah, Ill.</i>
Bradford Knapp, B.S., <i>Vanderbilt Univ.,</i>	<i>Ames, Ia.</i>
Max Koehler,	<i>St. Louis, Mo.</i>
Hans Adolph Kroeger,	<i>Traer, Ia.</i>
Francis Asbury Kulp,	<i>Battle Creek.</i>
William Lachner,	<i>Baker City, Ore.</i>
Raymond Arthur Latting,	<i>St. Johns.</i>
Swaby Latham Lawton,	<i>Lawton.</i>
Herbert Willard Levy,	<i>St. Louis, Mo.</i>
Isadore Levy,	<i>Chicago, Ill.</i>
Bertrand Lichtenberger,	<i>Savanna, Ill.</i>
Erasmus Christopher Lindley, B.L.,	<i>Detroit.</i>
Charles Elihu Longwell,	<i>Van Wert, O.</i>
Walter Leonard Loranger,	<i>Vassar.</i>
Jacob Lingard Lorie, B.L.,	<i>Kansas City, Mo.</i>
John Loughnane,	<i>Lapeer.</i>
Adelbert Alonzo Luckey,	<i>Rantoul, Ill.</i>
Charles Patriek Lund,	<i>Spokane, Wash.</i>
Arthur William Lux,	<i>Lovington, Ill.</i>
Henry Laurence Lyster, A.B.,	<i>Detroit.</i>
George Herbert Lytle,	<i>Pittsburgh, Pa.</i>
Clark Anderson Mabon, A.B., <i>National</i>	
<i>Normal University,</i>	<i>Marion Centre, Pa.</i>
Allan Campbell Mac Donald, Ph.B.,	<i>Black River.</i>
Ray George Mac Donald, Ph.B., <i>Albion</i>	
<i>College,</i>	<i>Flint.</i>
Thomas Joseph Mahon, A.B., <i>Detroit Coll.,</i>	<i>Detroit.</i>
Henry John Malone,	<i>Saginaw, West Side.</i>
William Charles Manchester,	<i>Canfield, O.</i>
Robert Woolf Manly,	<i>Chillicothe, O.</i>
William Mannhardt,	<i>Chicago, Ill.</i>
Herbert Rogers Marlatt,	<i>St. Louis, Mo.</i>
George Arthur Marston,	<i>Bay City.</i>
Abner Jackson LeClaire Martin, Ph.B., <i>Cor-</i>	
<i>nell College, Ph.B.,</i>	<i>Mt. Vernon, Ia.</i>
Walter Park Martindale, Ph.B.,	<i>Fulton, Ill.</i>
Quintin Amador Martinez,	<i>Penasco, New Mexico.</i>
Masaichiro Mayama,	<i>Mochituki, Japan.</i>
Charles Hamilton McBride, B.L., <i>Olivet</i>	
<i>College.,</i>	<i>Holland.</i>
George Washington McCaskrin,	<i>Rantoul, Ill.</i>
Harrison Madison McCaskrin, B.S., <i>Univ.</i>	
<i>of Illinois,</i>	<i>Rantoul, Ill.</i>

Allan Charles McCaughan,	<i>Des Moines, Ia.</i>
Charles Everett McConkey,	<i>Grove City, Pa.</i>
William McCormick,	<i>Potsdam, N. Y.</i>
John James McDougall,	<i>Hillsdale.</i>
Charles Lincoln McGuire,	<i>O'Neill, Neb.</i>
Ormsby McHarg,	<i>Jamestown, N. Dak.</i>
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John Alfred McKeown,	<i>Cheboygan.</i>
John McUlvan,	<i>Cheyenne, Wyo.</i>
Nelson McVicar,	<i>Leechburg, Pa.</i>
Arthur Augustus Meeker,	<i>Syracuse, N. Y.</i>
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Edward Menkin,	<i>Pittsburgh, Pa.</i>
George Edward Meredith,	<i>Charleston.</i>
Albert Edward Meyer,	<i>Kossuth, Ont.</i>
Arthur Miller,	<i>Chicago, Ill.</i>
George Riley Miller, Jr.,	<i>Freedom, O.</i>
Stephen Ivere Miller, Jr.,	<i>Howell.</i>
Rolfe Archibald Mills,	<i>Macon.</i>
Donald Ellis Minor, B.S., Northern Indiana	<i>Valparaiso, Ind.</i>
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John Robert Moore,	<i>Chesaning.</i>
Earle Victor Mudge,	<i>Pittsburgh, Pa.</i>
William Bruce Murdock,	<i>Ann Arbor.</i>
James Orin Murfin, B.L.,	<i>Belleville, Ont.</i>
Victor Alphonso George Murrell,	<i>Ann Arbor.</i>
Miron Williams Neal, A.B.,	<i>Omaha, Neb.</i>
Elmer James Neville,	<i>Detroit.</i>
Harry Glover Nicol,	<i>Pontiac.</i>
Donald Fraser Noble,	<i>Ann Arbor.</i>
Erasmus Lee Norris,	<i>Nevada, Ia.</i>
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Herbert King Oakes,	<i>Grand Rapids.</i>
George Timothy O'Farrell,	<i>Aral.</i>
Roger Stanley Olbinski,	<i>Fieldon, Ill.</i>
Edgar Paul O'Leary,	<i>Lamar, Mo.</i>
Mark Preston Olney,	<i>Wabash, Ind.</i>
Charles Marvin O'Neill,	<i>Topeka, Kan.</i>
Fletcher Asbury Payne,	<i>Lapeer.</i>
Harry A. Pence,	
Albert Hough Perkins,	

Stuart Hoffman Periy, A.B.,	<i>Pontiac.</i>
William Smith Pierson,	<i>Flint.</i>
Harry Anderson Pratt,	<i>Pittsburgh, Pa.</i>
Orville Wilbur Prescott,	<i>Cleveland, O.</i>
William Pringle,	<i>Ann Arbor.</i>
David Irving Prugh,	<i>Dayton, O.</i>
Frank Randolph, M.D.,	<i>White Pigeon.</i>
Clifford H. Rauch,	<i>Erie.</i>
Leonard LeRoy Redick,	<i>Mansfield, O.</i>
Thomas Benton Reeder,	<i>Logansport, Ind.</i>
Earl Dewey Reynolds, Ph.B., <i>Hillsdale Coll.,</i>	<i>North Adams.</i>
Alfred Rice,	<i>Curries, O.it.</i>
Ira Wells Riford,	<i>Grand Rapids.</i>
Arthur William Rinehart,	<i>Union, Ore.</i>
Herbert Norman Rose,	<i>Mt. Pleasant.</i>
John Albert Rosen,	<i>Topeka, Kan.</i>
Menz Israel Rosenbaum, Ph.B.,	<i>Kalamazoo.</i>
Lewis Eldoras Royal,	<i>Mt. Pleasant.</i>
William Benjamin Rubin,	<i>Milwaukee, Wis.</i>
Pierce Howard Ryan,	<i>Eureka, Cal.</i>
Elmer Guy Ryker,	<i>Springfield, Mo.</i>
Leland Howard Sabin,	<i>Centreville.</i>
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George Leon Sanders,	<i>St. Paul, Minn.</i>
J. Casper Sauer,	<i>Detroit.</i>
Thomas Francis Savage,	<i>Spring Lake.</i>
Benjamin Newton Savidge,	<i>Ottawa, Ill.</i>
Thomas Anton Scherer,	<i>Lockport, Ill.</i>
William Ralph Schmidt,	<i>Pittsburgh, Pa.</i>
Charles John Schuck,	<i>Salem, Ore.</i>
John Hamilton Scott,	<i>Ventura, Cal.</i>
Edward Milton Selby,	<i>Chicago, Ill.</i>
Angus Roy Shannon,	<i>Taylorville, Ill.</i>
George Elmer Sharp,	<i>Millersburg, O.</i>
Howard Melvin Sharp,	<i>Galesburg, Ill.</i>
Lowie Lucas Shelton,	<i>Howell.</i>
Edmund Claude Shields, B.L.,	<i>Ann Arbor.</i>
Ernest Russell Shoecraft,	<i>North East, Pa.</i>
Alfred Lee Short,	<i>Vicksburg, Miss.</i>
Joseph Hudson Short,	<i>Coldwater.</i>
William Henry Simons,	<i>Cloverport, Ky.</i>
James Robert Skillman,	

James Leonard Smalley,	<i>Springfield, Mo.</i>
Crapo Cornell Smith, A B., <i>Harvard Univ.,</i>	<i>Detroit.</i>
Newton Jasper Smith, Jr., B.S., <i>National</i>	
<i>Normal Univ.,</i>	<i>Blanton, Tex.</i>
Spurgeon Reece Smith,	<i>Shepardsville.</i>
Ernest Albert Snow,	<i>Saginaw, West Side.</i>
Oliver Lyman Spaulding, Jr., A.B.,	<i>St. Johns.</i>
Edward Everett Spear,	<i>Lincoln, Neb.</i>
William Ambrose Spill,	<i>Warren, O.</i>
Harry Guy Stalder, Ph.B., <i>Ohio University,</i>	<i>Athens, O.</i>
Weed Thorington Starkweather,	<i>Romeo.</i>
Carl Henry Stein,	<i>Owosso.</i>
John Harris Stephens,	<i>Dilltown, Pa.</i>
Louis Edson Stewart,	<i>Bellaire.</i>
Charles William Stratton, Ph.B.,	<i>St. Joseph.</i>
Cady Richard Stranahan,	<i>Helena, Mon.</i>
Heber Truman Strong,	<i>Detroit.</i>
Myron Richard Sturtevant,	<i>Springfield, Mass.</i>
Bradshaw Hall Swales,	<i>Detroit.</i>
Harvey Stowe Taft,	<i>Ann Arbor.</i>
Ganson Taggart,	<i>Grand Rapids.</i>
Richard Lee Taneyhill,	<i>Millersburg, O.</i>
Paoli Abram Tarr,	<i>Lebanon, O.</i>
Charles Alexander Taylor,	<i>Negaunee.</i>
Thomas Dudley Taylor,	<i>Owosso.</i>
Edwin Terwilliger, Jr.,	<i>Lansing.</i>
Wade Warren Thayer, A.B.,	<i>Fort Wayne, Ind.</i>
Charles Donald Thompson,	<i>Bad Axe.</i>
Ernest Laurie Thompson,	<i>Hepler, Kan.</i>
Osmond Holmes Tower,	<i>Ionia.</i>
J. Orra Traber,	<i>Selma, Cal.</i>
Warren Wesley Travis,	<i>La Porte, Ind.</i>
Irwin Joseph Truman, B.S., <i>Highland Park</i>	
<i>College,</i>	<i>Sloan, Ia.</i>
Charles Samuel Turnbaugh,	<i>Cambridge, O.</i>
Arthur Van Duren, A.B., <i>Hope College,</i>	<i>Holland.</i>
William Otto Van Eyck, A.B., <i>Hope Coll.,</i>	<i>Holland.</i>
Charles J. Vert,	<i>Morristown, N. Y.</i>
Giovanni Raphael Frank Villa, B.L., <i>Whit-</i>	
<i>man College,</i>	<i>Walla Walla, Wash.</i>
William Henry Vodrey, A.B., <i>Bethany</i>	
<i>College,</i>	<i>East Liverpool, O.</i>
George Hiram Voorhees,	<i>Cheyenne, Wyo.</i>

Charles Matthews Waidelich,	<i>Grand Rapids.</i>
Harry Hugh Wait,	<i>Ann Arbor.</i>
Henry Milton Wallace,	<i>Hartland.</i>
James Paddock Wason,	<i>Delphi, Ind.</i>
James Clyde Watt,	<i>Saranac.</i>
James Joseph Weadock,	<i>Lima, O.</i>
James Augustine Welsh,	<i>Shamokin, Pa.</i>
Robert Horner Welsh,	<i>Wilmerding, Pa.</i>
Benjamin Franklin Welty, B.S., <i>Ohio Normal University,</i>	<i>Bluffton, O.</i>
Henry Hermann Wende,	<i>Mill Grove, N. Y.</i>
Charles Stuart Wharton,	<i>Chicago, Ill.</i>
Lester Cook Whitten,	<i>Nokomis, Ill.</i>
Ralph Horace Wilkin,	<i>Robinson, Ill.</i>
Daniel Roderick Williams,	<i>Dawn, Mo.</i>
Guy Voorhees Williams,	<i>Portsmouth, O.</i>
Kenneth Dunham Williams,	<i>Atlanta, Ill.</i>
Olney Scott Williams,	<i>Santa Fe, New Mexico.</i>
Roy Hughes Williams,	<i>Milan, O.</i>
Edward Wilson,	<i>Decatur, Ill.</i>
Guy Merrill Wilson,	<i>Flint.</i>
Charles Henry Winkenwerder,	<i>Milwaukee, Wis.</i>
Forest Wood,	<i>Chicago, Ill.</i>
Fredric Abell Wood,	<i>Dakota City, Neb.</i>
David Burnham Woodworth,	<i>Chicago, Ill.</i>
Lewis Cass Wright,	<i>North Adams.</i>
Gilliam Clark Yoes,	<i>Van Buren, Ark.</i>
Jesse Grant Yont,	<i>Brock, Neb.</i>
John Joseph Zimmer, A.B., <i>Detroit Coll.,</i>	<i>Williamston.</i>

SECOND YEAR STUDENTS.

NAME.	RESIDENCE.
Grant Charles Bagley,	<i>Brinton, Utah.</i>
James H. Blackburn,	<i>Mt. Vernon, Ind.</i>
William Morris Bresler,	<i>Bay City.</i>
Roy Roscoe Coombs,	<i>Defiance, O.</i>
William Constance Douglas,	<i>Eagle Pass, Tex.</i>
Thomas Jesse Drumheller,	<i>Walla Walla, Wash.</i>
Freeman Field,	<i>Detroit.</i>
Ransom Gardner George, A.B.,	<i>Ypsilanti.</i>
James Sumner Handy, A.B.,	<i>Ann Arbor.</i>
William Lincoln Hart,	<i>Inverness, O.</i>
Henry Nephi Hayes,	<i>Richfield, Utah.</i>
Charles Thomas Lawton,	<i>Ypsilanti.</i>

Oscar Lippman,	<i>South Bend, Ind.</i>
Harry Albertus Miller,	<i>Dowagiac.</i>
Karl Roswell Miner,	<i>Ann Arbor.</i>
Charles LeRoy Moore,	<i>Sparta.</i>
James Timothy Norris,	<i>Watertown, Wis.</i>
Bayard Tamannund Riley,	<i>Paola, Kan.</i>
John Thomas Roberts,	<i>Utica, N. Y.</i>
Emmett Chauncey Ryan, Ph.B., <i>Scio Coll.,</i>	<i>New Cumberland, O.</i>
Duane Charles Salisbury,	<i>Ann Arbor.</i>
Archibald Stevenson, B.S., <i>Purdue Univ.,</i>	<i>Rockport, Ind.</i>
Charles Ezra White,	<i>Niles.</i>

FIRST YEAR STUDENTS.

NAME.	RESIDENCE.
Charles Stewart Abbott,	<i>Ann Arbor.</i>
Merrie Abbott,	<i>Ann Arbor.</i>
Earl Adams,	<i>Decatur, Ind.</i>
Earnest Bennett Adams,	<i>Los Angeles, Cal.</i>
John Quincy Adams, B.L.,	<i>Ann Arbor.</i>
Harvey Francis Ake, B.S., <i>Mount Union</i>	
College,	<i>Mapleton, O.</i>
Paul Young Albright,	<i>Philadelphia, Pa.</i>
Charles James Anderson,	<i>Le Roy, N. Y.</i>
Francis Gordon Anspach,	<i>Ann Arbor.</i>
Duane Darrow Arnold,	<i>Three Rivers.</i>
Alatan Leonard Charles Atkinson,	<i>Honolulu, H. I.</i>
Adelbert Kosciusco Baker,	<i>Battle Creek.</i>
Elisha Avery Baker,	<i>Clayton.</i>
George Edward Ball,	<i>Marquette.</i>
Mason Allen Bamborough,	<i>Mt. Pleasant.</i>
Michael John Barry,	<i>Cheyenne, Wyo.</i>
Edwin Southworth Bartlett,	<i>Brockton, Mass.</i>
George Herbert Batcheler,	<i>Buchanan.</i>
James J. Bell, Jr.,	<i>Shenandoah, Pa.</i>
Thomas Albert Berkebile,	<i>Kansas City, Mo.</i>
Berdel Dixon Bishop,	<i>Benton Harbor.</i>
William Romine Blackburn,	<i>Danville, Ill.</i>
Ozro Seth Blanchard,	<i>Council Bluffs, Ia.</i>
Peter Jacob Blosser,	<i>Slate Mills, O.</i>
Clayton Sweet Boice,	<i>Decorah, Ia.</i>
James Gordon Bonine,	<i>Niles.</i>
James Roy Boyd,	<i>La Porte, Ind.</i>
Elihu Harry Boynton,	<i>St. Clair.</i>
Samuel Braudy,	<i>Grand Rapids.</i>

Wallace Everett Brown,	<i>Detroit.</i>
Leo LaSalle Brunhild,	<i>Chicago, Ill.</i>
Edmund David Burke,	<i>Buffalo, Ill.</i>
Francis Marion Byam,	<i>Manistee.</i>
Fred Lambert Camp,	<i>Union City, Pa.</i>
Grace Hayne Carleton,	<i>Sault Ste. Marie.</i>
Charles Austin Carter,	<i>Detroit.</i>
James Henry Casselman,	<i>Ames, Ia.</i>
John Caywood,	<i>Graham, Mon.</i>
Charles Fayette Chapman, Jr.,	<i>Perrysburg, O.</i>
James Ferson Clark,	<i>Rantoul, Ill.</i>
James W. Clendenin,	<i>Monmouth, Ill.</i>
Augustine Francis Connolly,	<i>Wakeman, O.</i>
Star Crowell,	<i>Brooklyn.</i>
Arnold Lyman Davis, A.B., <i>University of</i>	
<i>South Dakota,</i>	<i>Watertown, S. Dak.</i>
Louis Robinson Dice,	<i>Portsmouth, O.</i>
Hugo Edgar Dieterichs,	<i>St. Louis, Mo.</i>
Mortimer Adolph Dittenhoefer,	<i>Mansfield, O.</i>
Myron Elmer Douglas,	<i>Fenton.</i>
James Sylvester Doyle, A.B., <i>Detroit Coll.,</i>	<i>Detroit.</i>
Arthur Wood Dunn,	<i>Hiawatha, Kan.</i>
Irvin Clarence Diggins,	<i>Waynetown, Ind.</i>
John Francis Eagan,	<i>Mt. Clemens.</i>
Alonzo Jay Edgerton, Jr.,	<i>Sioux Falls, S. Dak.</i>
Thomas Edwards, Jr.,	<i>Ann Arbor.</i>
Charles Engelhard,	<i>David City, Neb.</i>
Burdette Evans,	<i>Wyandotte.</i>
Charles Hackleman Ewing,	<i>Greensburg, Ind.</i>
William Henry Feindt, Jr.,	<i>Chicago, Ill.</i>
George Nicholas Fell,	<i>Toledo, O.</i>
Corry Craig Farrell,	<i>Faucett, Mo.</i>
George Calvin Finfrock,	<i>Detroit.</i>
George Forrest Firestone,	<i>Akron, O.</i>
Fred Fischer,	<i>Shenandoah, Ia.</i>
Daniel Webster Fishell,	<i>Chicago, Ill.</i>
Neville Charles Fisher,	<i>Paris, Ky.</i>
†Louis Jesse Fletcher,	<i>Sugar Grove, Ill.</i>
Carl Lewis Flood,	<i>Hart.</i>
William Merrick Forsyth,	<i>Ann Arbor.</i>
William Francis Foster, Ph.B., <i>DePauw</i>	
<i>University,</i>	<i>Seymour, Mo.</i>
Christopher C. Fouch,	<i>Gladstone.</i>

George Roy Fox,
Fredrick Joseph French,
Samuel Friedlander,
Louis August Gade,
Eugene Paul Gailey,
Eugene Geismer,
Thomas Henry George,
Edward Ellis Gilbert,
Harry Ralph Goldman,
Dwight Livingston Goodyear,
Edwin Howard Gordon,
George Budd Gould,
Ziba Kent Graham,
Fred Warren Green,
Charles Edward Greenwald,
Boone Gross,
Orion Melvin Grove,
Eugene Edgar Grumbine,
Ephraim Hanson,
George Roscoe Harper,
Hugh Hart,
Maurice Edward Harvey,
Edgar Thomas Hawley,
Forrest S. Hayes,
Lewis Hunter Hays,
Robert Healy,
Howard Erb Hecker,
William Briggs Hice,
William Boutain Hile,
James Henry Hill,
George Maurice Hoffheimer,
Rupert Holland,
William Truman Hosner,
William Andrew Holzheimer,
Eugene Patrick Hourihan,
John Robert Hudson,
Otis Huff,
Stephen Johnston Humeston,
Edward Franklin Irwin,
Theo T. Jacobs,
Benjamin Jacobson,
James Daly Jerome,
Robert Nelson Johnson,

Bay City.
Union City.
Chicago, Ill.
Williams, Ia.
Ashland, Ill.
Ann Arbor.
Port Huron.
Boyne Falls.
Rockford, Ill.
Hastings.
Tyner, N. Dak.
Aspen, Col.
Detroit.
Ypsilanti.
Whiting, Ind.
Chicago, Ill.
Mt. Carroll, Ill.
Chicago, Ill.
Ephraim, Utah.
Goshen, Ind.
St. Clair.
Elba.
Boise City, Idaho.
Galva, Ill.
Peoria, Ill.
Fort Dodge, Ia.
Mainland, Pa.
New Albany, Ind.
Ransom.
Edinburg, Ill.
Galesburg, Ill.
Siney, O.
Romeo.
Saginaw, East Side.
Arroyo Grande, Cal.
San Jose, Cal.
Volinia.
Eaton Rapids.
Pleasant Plains, Ill.
Sturgis.
Detroit.
Detroit.
Fort Madison, Ia.

Charles Carroll Jones,	<i>Ironwood.</i>
George William Jones, Jr.,	<i>Allegheny, Pa.</i>
William Kaspar, Jr.,	<i>Chicago, Ill.</i>
Cornelius Francis Kelley,	<i>Butte, Mon.</i>
Alfred Silverthorn Kepner,	<i>Chicago, Ill.</i>
William Thomas Kidd,	<i>Allouez.</i>
William Duncan Kilpatrick,	<i>Owosso.</i>
Isaac Newton Kinney,	<i>West Bay City.</i>
Laudros Melendez King,	<i>Coolwell, Va.</i>
Benjamin Volcan Kohort,	<i>Wilber, Neb.</i>
Gustave Knab,	<i>Armor, N. Y.</i>
Charles Edgar Lahman,	<i>Franklin Grove, Ill.</i>
James Oliver Laing,	<i>Leavenworth, Kan.</i>
Walter Napoleon Langell,	<i>St. Clair.</i>
Frank Collins Lash,	<i>Linneus, Mo.</i>
James Thomas Lawler,	<i>Bay City.</i>
Louis Lee Legg,	<i>Doddsville, Ill.</i>
Thomas Bishop Leith,	<i>Saline.</i>
Albert D. Leyhe,	<i>Lancaster, Mo.</i>
Peter Michael Lippert,	<i>Pittsburgh, Pa.</i>
John Stafford Lofland,	<i>Romney, Ind.</i>
Charles Clinton Lones, Ph.B., <i>Mt. Union</i>	
<i>College,</i>	<i>Park, O.</i>
Archer Frederick Lowe,	<i>Loudon, N. H.</i>
Oliver Allen Ludlow,	<i>LaPorte, Ind.</i>
Charles Montgomery Luthy,	<i>Millersburg, O.</i>
James Franklin Lynch,	<i>Danville, Ind.</i>
Glenn Sharp Mack,	<i>Madison.</i>
Mark Watson Marshall,	<i>Pittsburgh, Pa.</i>
John Fleming Main, Ph.B., <i>College of New</i>	
<i>Jersey,</i>	<i>Seaton, Ill.</i>
William Henry Martin,	<i>Saginaw, West Side.</i>
Frank Gray Mason,	<i>Emporia, Kan.</i>
William Orin Mathews,	<i>Rockport, O.</i>
Thomas Gilbert Mays,	<i>Ann Arbor.</i>
Thomas Edward McBride,	<i>Duluth, Minn.</i>
George Percy McCallum,	<i>Schoolcraft.</i>
Joseph McClure,	<i>Pittsburgh, Pa.</i>
William Sterling McCluskey,	<i>Greenwood, Ia.</i>
Starnes McNinch,	<i>Brownville, Neb.</i>
Gifford Brown McKay,	<i>Saginaw, East Side.</i>
Fred How McMullen,	<i>Lewiston.</i>
Cyrus Edward Mead,	<i>Bay City.</i>

Fred Winchester Mears, A.B.,	<i>Brown Univ., Newton Centre, Mass.</i>
Henry Charles Meining,	<i>Duluth, Minn.</i>
Harold Cassius Mendelson,	<i>Ludington.</i>
Harry J. Mercer,	<i>Ventura, Cal.</i>
Conrad Miller,	<i>McKeesport, Pa.</i>
Craig Carlton Miller,	<i>Marshall.</i>
George Francis Mimnaugh,	<i>Perry, Ore.</i>
Dwight Elmer Minnis,	<i>Taylorville, Ill.</i>
George Arthur Mitchell,	<i>Republic.</i>
Herbert Allen Moore,	<i>Elmira.</i>
John Plunkett Morse,	<i>Rochester, N. Y.</i>
Julius Thamer Muench,	<i>St. Louis, Mo.</i>
Edward Ray Nadelhoffer,	<i>Joliet, Ill.</i>
Albert Lawrence Neal,	<i>Trade City, Pa.</i>
Jesse D. Neff,	<i>New Prairie, Ind.</i>
Omar F. Neff,	<i>Milford, Ind.</i>
†Samuel Frederick Nichols,	<i>Beatrice, Neb.</i>
Harold James Norris,	<i>Saginaw, East Side.</i>
John Henry Notley,	<i>Vicksburg.</i>
Lewis Allen Nuckols, B.S.,	<i>Kentucky Univ., Versailles, Ky.</i>
Charles O'Connor,	<i>Greenville, O.</i>
Patrick Henry O'Donnell,	<i>Belvidere, Ill.</i>
David C. Oliver,	<i>Onawa, Ia.</i>
Lawrence Shearman Page,	<i>Marshall.</i>
Dan Fredrick Pagelsen,	<i>Grand Haven.</i>
Allen Brooks Parker,	<i>West Acton, Mass.</i>
Earl Peters,	<i>Pleasanton, Ia.</i>
Matthias Bovee Pittman,	<i>Boscobel, Wis.</i>
Ralph Prime Pooley,	<i>Toledo, O.</i>
Harry Augustus Pounds,	<i>Oberlin, O.</i>
James H. Pruitt,	<i>Watseka, Ill.</i>
Otis Chester Rankin,	<i>St. Clair.</i>
Richard Ray,	<i>Huntsville, Ark.</i>
Alexander McCall Rea,	<i>Pontiac.</i>
John Rice, Jr.,	<i>Stevens Point, Wis.</i>
George Delbert Robbins,	<i>Galesburg, Ill.</i>
William Ransom Roberts,	<i>Traverse City.</i>
Albert Thomas Rogers, Jr.,	<i>East Las Vegas, New Mex- ico.</i>
Karl Elof Sallman,	<i>Corydon, Ia.</i>
Frank R. Sanders,	<i>Buchanan.</i>
Andrew Jackson S.	<i>Ann Arbor.</i>
Lorenzo Sa	<i>Ann Arbor.</i>

Thomas Philip Schmidt,	<i>Cleveland, O.</i>
Otto John Schultz,	<i>Chicago, Ill.</i>
George Thomas Scotney,	<i>Ypsilanti.</i>
Wallace Dutton Scott,	<i>Detroit.</i>
William Adam Seeg Miller,	<i>Petoskey.</i>
Charles Franklin Setzler,	<i>Vandalia.</i>
Frank Gray Shaver,	<i>Pittsburgh, Pa.</i>
Jeremiah Timothy Shea,	<i>Lostant, Ill.</i>
Edwin Rucker Sheetz,	<i>Chillicothe, Mo.</i>
Samuel Sheetz,	<i>Chillicothe, Mo.</i>
Howard Ion Shepherd,	<i>Charlotte.</i>
Truman William Shields,	<i>Saunemin, Ill.</i>
Joseph Roy Showalter,	<i>Ann Arbor.</i>
Roland Henry Shumway, Jr.,	<i>Rockford, Ill.</i>
Harry Silvey,	<i>Pittsburgh, Pa.</i>
David Emanuel Sites,	<i>Lancaster, O.</i>
Harry Bowne Skillman,	<i>South Bend, Ind.</i>
Errol Henry Spicer,	<i>Detroit.</i>
Francis Edward Stevens,	<i>Columbus, Ind.</i>
George Morrow Stevens, Jr.,	<i>Saginaw, East Side.</i>
Edwin James Steinmeyer,	<i>Canon City, Col.</i>
Frederick William Stolz,	<i>Saginaw, East Side.</i>
Carl Theodore Storm,	<i>Kirksville, Mo.</i>
William Ellis Stowe,	<i>Omaha, Neb.</i>
George Lewis Sutter,	<i>Beaver Falls, Pa.</i>
Frederick A. Sweet,	<i>Dorrance, Kan.</i>
John Taneyhill,	<i>Millersburg, O.</i>
Charles Edward Theobald,	<i>Bennett, Pa.</i>
Edmund Joseph Tisdale,	<i>Tilbury, Ont.</i>
Harry De Camp Tousley,	<i>Logansport, Ind.</i>
Wellington Samuel Towner,	<i>Elgin, Ill.</i>
Ernest Page Truesdell,	<i>Belvidere, Ill.</i>
Dwight Joseph Turner,	<i>Bay City.</i>
Robert Bradford Upham,	<i>Chicago, Ill.</i>
Floyd J. Vanness,	<i>Victor, N. Y.</i>
August John Waffan,	<i>Iron Mountain.</i>
Thomas John Weadock,	<i>Bay City.</i>
Andrew Jay Weatherwax, Jr.,	<i>Jackson.</i>
Rufus Lee Weaver, B. S., <i>State College, Ky.,</i>	<i>Frazer, Ky.</i>
Wellington Jay Wetherbee,	<i>Friendship, N. Y.</i>
Archie King Wheeler,	<i>Newberry.</i>
John Palmer Whiting,	<i>St. Clair.</i>
George Henry Wilkes,	<i>Lebanon, Ore.</i>

John Llewellyn Willoughby,	<i>Napa, Cal.</i>
Ralph Emerson Wisner,	<i>Detroit.</i>
Orestes Humphrey Wright,	<i>Freeport, Ill.</i>
Wesley John Wuerfel,	<i>Toledo, O.</i>
Harvey Yeaman,	<i>Henderson, Ky.</i>
Edward William Young,	<i>Marshallton, Pa.</i>
Louis Zimmerman,	<i>Chicago, Ill.</i>

SPECIAL STUDENTS.

NAME.	RESIDENCE.
Robert Stephenson Anderson, A.B., <i>Washington and Jefferson Coll.,</i>	<i>Pueblo, Col.</i>
Max Wellington Babb, A.B., <i>Iowa Wesleyan University,</i>	<i>Mt. Pleasant, Ia.</i>
Ford Belford,	<i>Toledo, O.</i>
†Ralph Raymond Bowdle,	<i>Mitchell, S. Dak.</i>
John Scott Cash,	<i>Duluth, Minn.</i>
David Worth Clark,	<i>Idaho Falls, Idaho.</i>
Nathan Hadley Clark,	<i>Idaho Falls, Idaho.</i>
†Robert Smith Cummings,	<i>Toledo, O.</i>
Herbert Allan Dancer, B.L.,	<i>Chelsea.</i>
Walter Edwin Dorland,	<i>Chicago, Ill.</i>
Stephen Alexander Graham,	<i>Port Huron.</i>
Charles Wilford Hills,	<i>Ann Arbor.</i>
*William Morris Long, B.S., <i>Adrian College,</i>	<i>Deerfield.</i>
Joseph Amburg Parrett,	<i>Circleville, O.</i>
John Sherring Pratt,	<i>Toledo, O.</i>
Andrew Daniel Reese,	<i>Altoona, Pa.</i>
Dwight Cutler Sheldon,	<i>Grand Haven.</i>
Clare Hart Stearns,	<i>Kalamazoo.</i>
Stewart Lawrence Tatum,	<i>Denver, Col.</i>
Arthur Willis Waugh,	<i>Alliance, O.</i>
Edward Francis Wehrle, Ph.B., <i>University of Iowa,</i>	<i>Mt. Pleasant, Ia.</i>

The students named below, enrolled in the Department of Literature, Science, and the Arts, also pursue studies in the Department of Law.

Robert Sumner Albee,	<i>Oshkosh, Wis.</i>
Charles Wallace Adams, A.B.,	<i>Ann Arbor.</i>
Harry Edward Bodman,	<i>Toledo, O.</i>
William Gordon Bryant,	<i>Mt. Clemens.</i>
Oscar Phipps Cole,	<i>Berlin, N. H.</i>
Charles Goldsmith Cook,	<i>Detroit.</i>

James Joseph Franc,
Luman Webster Goodenough,
Hobart Birney Hoyt,
Medor Ewing Louisell,
Frank Prather Sadler,
George Howe St. Clair,
J. Sterling St. John,
Alonzo Hubert Tuttle,
Hadley Horton Walch,

Toledo, O.
Ludington.
Grand Rapids.
Eastlake.
Grove City, Ill.
Duluth, Minn.
Ann Arbor.
Decatur, Ill.
Grand Rapids.

School of Pharmacy.

FACULTY.

- JAMES B. ANGELL, LL.D., *President.*
✓ ALBERT B. PRESCOTT, Ph.D., M.D., *Dean.*
✓ WILLIAM H. PETTEE, A.M.
✓ VOLNEY M. SPALDING, A.B.
✓ OTIS C. JOHNSON, Ph.C., A.M.
✓ PAUL C. FREER, Ph.D., M.D.
✓ EDWARD D. CAMPBELL, B.S.
✓ ALVISO B. STEVENS, Ph.C., *Secretary.*
✓ FREDERICK C. NEWCOMBE, B.S., Ph.D.
✓ DAVID M. LICHTY, M.S.
✓ MOSES GOMBERG, Sc.D.
✓ PERRY F. TROWBRIDGE, Ph.B.

Assistants.

JAMES SEYMOUR, Ph.C.
CHARLES H. WILLIAMS, Ph.B., Ph.C.

STUDENTS.

HOLDER OF THE STEARNS FELLOWSHIP.

NAME.	RESIDENCE.
James W. T. Knox, Ph.C., Organic Chemistry.	Ann Arbor.

UNDERGRADUATES.*

NAME.	DEGREE.	CREDIT.	RESIDENCE.
Ursa S. Abbott,	Ph.C.	12	Clearport, O.
James Willard Ames,	Ph.C.	34	Williamsburg, Ky.

*The abbreviations in the column headed DEGREE indicate the degree for which the student is studying. Where no abbreviation is given, the student is pursuing miscellaneous studies without being registered as a candidate for a degree. The figures in the column headed CREDIT indicate the number of hours of work taken by the student prior to the beginning of the current academic year, 1895-96, and completed without conditions, or credited to him on advanced standing. By an hour of work is meant the equivalent of one exercise a week for one semester. Compare page 183.

Frederick James Austin,	Ph.C.	<i>Ann Arbor.</i>
Eva Albertie Taylor Bach- elder,	Ph.C.	<i>St. Charles, Minn.</i>
John Sell Bachman,	Ph.C.	<i>Morrice.</i>
Frederick Jay Baringer,	Ph.C.	<i>Gould, O.</i>
Clarence Henry Baum,	Ph.C.	34 <i>Danville, Ill.</i>
George Woodbury Beisel,	Ph.C.	<i>Monroe.</i>
Evi Dunn Benjamin,	Ph.C.	<i>Pontiac.</i>
Hart Beyer,	Ph.C.	<i>Orange City, Ia.</i>
Norman Taylor Boggess,	Ph.C.	<i>Huntington, W. Va.</i>
John Henry Brown,	Ph.C.	<i>Wilmington, O.</i>
Walter Briggs Cady, Ph.C.,	B.S.	82 <i>Ypsilanti.</i>
Arthur Fremont Calerdine,	Ph.C.	34 <i>Minerva, O.</i>
Andrew C. Christenson,	Ph.C.	<i>Ludington.</i>
James William Cobb,	Ph.C.	<i>Birmingham.</i>
Milo Cornwall,		10 <i>Denver, Col.</i>
Otis Adams Critchett,	Ph.C.	<i>Ann Arbor.</i>
John Wesley Derry,	Ph.C.	16 <i>Baltimore, Md.</i>
Oscar Conrad Diehl, Ph.G.,		
<i>Buffalo Coll. of Phar.,</i>	Ph.C.	41 <i>Buffalo, N. Y.</i>
George Lee Downing,	Ph.C.	<i>Lima, O.</i>
Charles Francis Drake, Ph.C.,	B.S.	63 <i>Chicago, Ill.</i>
Arthur Ernest Fox,	B.S.	<i>Topeka, Kan.</i>
Edward Cumberford Frank,	Ph.C.	<i>Toledo, O.</i>
Hubert Oscar Gerding,		<i>Glandorf, O.</i>
Henry Hermann Gerkenmeyer,		<i>Toledo, O.</i>
Charles Dwight Goff,	Ph.C.	<i>Tremont, Neb.</i>
Oscar William Gorenflo,	B.S.	<i>Detroit.</i>
Edward Sherman Gott,	Ph.C.	<i>Fort Madison, Ia.</i>
Arthur Luke Green,	Ph.C.	<i>Port Clinton, O.</i>
John Hartz,	Ph.C.	8 <i>College Point, N. Y.</i>
George Millard Heath,	Ph.C.	37 <i>Milan.</i>
Perley Willis Hickman,	Ph.C.	<i>Nelsonville, O.</i>
Frank Carleton Hitchcock,	Ph.C.	34 <i>Plainwell.</i>
Charles Ralph Horton,	Ph.C.	37 <i>Northville.</i>
Charles Willis Johnson,	Ph.C.	37 <i>St. Joe Station, Ind.</i>
Raymond Edward Kanouse,		<i>Manistee.</i>
George E. Lohrstorfer,	Ph.C.	20 <i>Port Huron.</i>
John William Lutes,	Ph.C.	17 <i>Richmond.</i>
Fred C. Manchester,		<i>Port Huron.</i>
Willard Jay Merrill, A.B.,		
<i>Lawrence Univ.,</i>	Ph.C.	<i>Appleton, Wis.</i>
†Harry E. Moore,		<i>Ypsilanti.</i>

Clara Ella Nichols,	Ph.C.		<i>Beach City, O.</i>
Robert James Nisbet,	Ph.C.	34	<i>Chicago, Ill.</i>
Walter Adams Nivling,	Ph.C.		<i>Sioux City, Ia.</i>
William Henry Noll,			<i>Fort Wayne, Ind.</i>
Edwin James Fuller Ostrander.	Ph.C.	34	<i>London.</i>
Arthur Thomas Paull,	Ph.C.		<i>Calumet.</i>
†Harry Benjamin Phelps,			<i>West Bay City.</i>
S. Agnes Rich,	Ph.C.		<i>Traverse City.</i>
John Richmond,	Ph.C.		<i>Mt. Pleasant.</i>
Sara Esther Richter,	Ph.C.		<i>Bethany, Mo.</i>
William Nelson Richter,			<i>Huntington, Ind.</i>
Georgia G. Robinson,	Ph.C.		<i>Battle Creek.</i>
Harry David Rumps,	Ph.C.		<i>Battle Creek.</i>
Isidore Sanders,	Ph.C.	34	<i>Trinidad, Col.</i>
Philip Schaupner,	Ph.C.		<i>Little Rock, Ark.</i>
Edward Louis Schmitt,	Ph.C.	34	<i>Rochester, N. Y.</i>
Walter Scotten,			<i>Detroit.</i>
Harry Theophilus Smith,	Ph.C.	45	<i>Vincent, Pa.</i>
Richard John Stephany,	Ph.C.		<i>Rochester, N. Y.</i>
Alice M. Stevens,	Ph.C.		<i>Evansville, Wis</i>
Harry Schellhous Stoddard,	Ph.C.		<i>Monroe.</i>
Amos Dorwin Sturgis,	Ph.C.	14	<i>Sturgis.</i>
Dan Gardner Swannell,	B.S.	60	<i>Champaign, Ill.</i>
Roland Bert Taber,	Ph.C.	34	<i>Benton Harbor.</i>
Henry Wright Taylor, B.S., <i>Earlham College,</i>	Ph.C.	37	<i>Bowling Green, Ky.</i>
S. Edward Thompson,	Ph.C.		<i>Georgetown, Ky.</i>
Miles Lucius Trowbridge,	Ph.C.	34	<i>Syracuse, N. Y.</i>
Milton Lyman Trowbridge,	Ph.C.	34	<i>Syracuse, N. Y.</i>
John Walter Van Horn,	Ph.C.		<i>Osceola, Neb.</i>
Charles August Fred von Walthausen,	Ph.C.	34	<i>Bay City.</i>
Charles Franklin Watkins,	Ph.C.	13	<i>Reed City.</i>
Clarence Albert Weaver,	Ph.C.	34	<i>Utica, N. Y.</i>
John Evans Wells,	Ph.C.		<i>Weston, Mo.</i>
Oscar Charles Wheeler,	Ph.C.		<i>Ann Arbor.</i>
George Purdy Wilder,	Ph.C.		<i>Albion.</i>
Elisha Bird Williams,	Ph.C.		<i>Ann Arbor.</i>
Frank Howard Wilson,	Ph.C.		<i>Virginia, Ill.</i>
Edward Chancey Worden,	Ph.C.		<i>Ypsilanti.</i>
Frank Yott, Jr.,	Ph.C.		<i>Midland.</i>
George Frank Zerzan,	Ph.C.		<i>Schuyler, Neb.</i>

Homœopathic Medical College.

FACULTY.

JAMES B. ANGELL, LL.D., *President.*
WILBERT B. HINSDALE, A.M., M.D., *Dean.*
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ROY S. COPELAND, M.D., *Secretary.*
MYRON H. PARMELEE, M.D.

OSCAR R. LONG, M.D.,
Non-Resident Lecturer on Mental and Nervous Diseases.

Assistant.

*CASH C. MANTZ, M.D.

STUDENTS.

FOURTH YEAR STUDENTS.

NAME.	RESIDENCE.
Sumner George Bush,	<i>St. Louis.</i>
Fred Charles Gilcher,	<i>Sandusky, O.</i>
William Franklin Holmes,	<i>Somerville, Mass.</i>
Fred Alvord Miner,	<i>Ann Arbor.</i>
Charles William Ryan,	<i>Ypsilanti.</i>
John Frank Titus,	<i>Fostoria, O.</i>

THIRD YEAR STUDENTS.

NAME.	RESIDENCE.
Lydia Maria Adams DeWitt,	<i>Dexter.</i>
Albert Jeremiah Elliott,	<i>Ulverton, P. Q.</i>
Charles Martin Steele,	<i>Buchanan.</i>

SECOND YEAR STUDENTS.

NAME.	RESIDENCE.
Bertram Franklin Bailey,	<i>Buchanan.</i>
Joseph Harris Ball,	<i>Ann Arbor.</i>

* Deceased.

Charles Montague,	<i>Buchanan.</i>
Clarence Augustus Schimansky,	<i>Sandusky, O.</i>
Leonard Herbert Stewart, Ph.B., <i>Kalamazoo</i>	
<i>College,</i>	<i>Ann Arbor.</i>
Samuel Porter Tuttle,	<i>St. Louis.</i>
Marion Wells,	<i>Garbutt, N. Y.</i>

FIRST YEAR STUDENTS.

NAME.	RESIDENCE.
Russell E. Atchison,	<i>Salem.</i>
William Alfred Crandall, LL.B.,	<i>Toledo, O.</i>
Robert Lloyd Johnson,	<i>Vassar.</i>
James William Kelly,	<i>Kalamazoo.</i>
Frances Jane Millard,	<i>Rochester, N. Y.</i>
Dean Wentworth Myers,	<i>Muir.</i>
Job Elsworth Reynolds,	<i>Ann Arbor.</i>
Eli Schwartz,	<i>Norway.</i>
Paul Thompson,	<i>Lapeer.</i>
Tisdale Sartoris Walker,	<i>Salem.</i>
Floyd Edward Westfall,	<i>Niles.</i>

College of Dental Surgery.

FACULTY.

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NELVILLE S. HOFF, D.D.S.
FREDERICK G. NOVY, Sc.D., M.D.
G. CARL HUBER, M.D.
SIMON M. YUTZY, M.D.
DAVID M. LICHTY, M.S.
LOUIS P. HALL, D.D.S.
CYRENUS G. DARLING, M.D.

Demonstrators and Assistants.

ALLISON W. HAIDLE, D.D.S.
JOHN H. NEELEY, D.D.S.

STUDENTS.

SENIORS.

NAME.	RESIDENCE.
Elmer Harry Argetsinger,	<i>Mapleton, Minn.</i>
Frank Charles Arnold,	<i>Ann Arbor.</i>
Jay Cyrus Arnold,	<i>Ann Arbor.</i>
Frank Miller Bacon,	<i>St. Clair.</i>
Clarence Harvey Bailey,	<i>Detroit.</i>
John Wesley Bass,	<i>Sullivan, Ind.</i>
Eddie W. Brown,	<i>Nashville.</i>
Edward Dancey Brown,	<i>Brownsville, Ont.</i>
Robert Reynolds Buckthorpe,	<i>Jacksonville, Ill.</i>
Harry Sizer Buell,	<i>Menominee.</i>
George Franklin Burke,	<i>Ann Arbor.</i>
Willis Hezekiah Buttolph,	<i>Pontiac.</i>
Jessie Estelle Castle,	<i>Battle Creek.</i>

James Nelson Clarke,	<i>Flushing.</i>
Charles William Cleaver,	<i>Ann Arbor.</i>
Jonathan Peter Collett, B.S., <i>National Nor-</i>	
<i>mal Univ.,</i>	<i>Ansonia, O.</i>
Irving William Copeland,	<i>Paw Paw.</i>
Ernest Frank Day, L.D.S.,	<i>London, Eng.</i>
George Leonard David,	<i>Aledo, Ill.</i>
Edwin Victor Deans,	<i>Ox Bow, N. Y.</i>
Charles Alphonsus Devlin,	<i>Vallejo, Cal.</i>
Stanford James Farnum,	<i>Cassopolis.</i>
Stanley Ammon Farnum,	<i>Cassopolis.</i>
Charles Frederick Fitch,	<i>Jamestown, N. Y.</i>
Fred Anson Graham,	<i>Ann Arbor.</i>
Fred Joseph Hale,	<i>Ypsilanti.</i>
Hector Hillman,	<i>Ann Arbor.</i>
Cleveland Artley Houghton,	<i>Theresa, N. Y.</i>
Burton Truman Hunt,	<i>Antwerp, N. Y.</i>
Charles Lee Kemery,	<i>Flint.</i>
Vernor Jay Lathrop,	<i>Morgan.</i>
John Adolph Lentz, LL.B.,	<i>Ann Arbor.</i>
Howard Joseph Livingston,	<i>Denver, Col.</i>
Frank Erland Logan,	<i>Pickering, Ont.</i>
James White Lyons,	<i>Mt. Pleasant.</i>
Thomas Steven Mann,	<i>Ann Arbor.</i>
Samuel Stephen Mummery,	<i>Ann Arbor.</i>
James Henry O'Toole,	<i>Ann Arbor.</i>
Charles Augustus Phillips,	<i>Terre Haute, Ind.</i>
Ross Porter,	<i>West Sunbury, Pa.</i>
Frank Glenn Powers,	<i>Scotts.</i>
Herman Prinz,	<i>Toledo, O.</i>
Charles Alfred Quackenbush,	<i>Ludington.</i>
James Robins,	<i>Warminster, Ont.</i>
William Howard Roper,	<i>Reedsburg, Wis.</i>
Thomas Francis Sheridan,	<i>Flushing.</i>
Charles Levant Sherwood,	<i>Titusville, Pa.</i>
Charles Eyster Slagle,	<i>Oregon, Ill.</i>
Albert Lyman Smith,	<i>Orange.</i>
William Joseph Stapish,	<i>Chelsea.</i>
Morley Punchun Templar,	<i>Woodstock, Ont.</i>
Wilber Townsend,	<i>Albia, Ia.</i>
Alburtus Van Ark,	<i>Holland.</i>
Ernest Percy Van Kleeck,	<i>Ann Arbor.</i>
Charles Alfred Wehe,	<i>Topeka, Kan.</i>

Ralph Levant Williams,
 Raymond Lester Williams,
 William Parker Winning,
 Robert Millard Woodin,
 George Herbert Wooton,
 John Alexander Wooton,
 Percy Bennett Wright,

East Randolph, N. Y.
Beaver Dam, Wis.
Saginaw, East Side.
Ann Arbor.
Hastings.
Hastings.
Jackson.

JUNIORS.

NAME.
 William Henry Baker,
 Clare George Bates,
 Arthur Stanley Bayne,
 Elmer Isaac Beistle,
 James Carroll Blair,
 Harry Earl Blunt,
 Ernest Edward Bubb,
 June Alice Burr,
 Thomas Edward Carmody,
 Herbert Thurston Cummings,
 Lewis M. Dickens,
 Albert DuBois,
 Arthur Benton Dutch,
 George Daniel Edgar,
 Henry Christopher Fiebig,
 Frank Russell Fletcher,
 John E. Graham,
 Selwyn Sumner Greeley,
 Albert Benjamin Green,
 Grant Simon Hadley,
 Clark Warner Hill,
 Louis Richard Hoelzle,
 Harry Sanburn Holmes,
 Samuel Wesley Honey,
 Fred Holloway Hood,
 Frank Ward Howlett,
 Samuel William Hussey,
 Wendell Howard Johnson,
 Fred William Joslin,
 Frederick John Klein, Jr.,
 Gustavus Eugene Kuhl,
 Mason G. Martin,
 Harry Almont McGrath,
 Kenneth McKay,

RESIDENCE.
Dalton.
Elsie.
LaSalle, Ill.
Buchanan.
Toledo, O.
Ann Arbor.
Gloucester, England.
Bangor, Me.
Owosso.
Grand Haven.
Ontonagon.
Nee Nah, Wis.
Constantine.
Blissfield.
Grand Rapids.
Cadillac.
Waterloo, Ind.
Waterman, Ill.
Pinckney.
Hillsdale.
Ann Arbor.
Ann Arbor.
Caribou, Me.
Mitchell, Ont.
Rome.
Ann Arbor.
Mendon, O.
Alliance, O.
Big Rapids.
Detroit.
Manchester.
Carson City.
Bangor.
Midland.

Frank Thomas McNamara,
 Roland Sweetland Mitchell,
 Blaine Bowman Pettit,
 William Racine Purmort,
 Carlos Walter Putt,
 Oloff Wellington Randall,
 Albert Jesse Reed,
 Dessie Brown Robertson,
 John Milton Rosenthal,
 George Willford Russell,
 Samuel Kane Scharlott,
 †Arthur Walker Schurtz,
 Charles Elsworth Sheldon,
 Charles Lindsley Sitzler,
 Luman Reed Slawson,
 James Curtis Snook,
 Charles Clifford Stone,
 Delmer Willis Stoup,
 Daniel Templar,
 George Dielerich Tienken,
 James Norman Vodrey, Jr.,
 Benjamin Franklin Vosburgh,
 Harry Douglas Watson,
 Albert Joseph Wildanger,
 Albert John Wolfert,

Chelsea.
 Ann Arbor.
 St. Louis.
 Saginaw, West Side.
 Ann Arbor.
 Port Huron.
 Saginaw, East Side.
 McConnelville, O.
 Fort Wayne, Ind.
 St. Joseph.
 Steubenville, O.
 Goshen, Ind.
 Ann Arbor.
 Ann Arbor.
 Bay City.
 Southampton, England.
 Carson City.
 Ann Arbor.
 Woodstock, Ont.
 Rochester.
 East Liverpool, O.
 Ann Arbor.
 Grand Rapids.
 Flint.
 Toledo, O.

FRESHMEN.

NAME.
 Edward John Anderson,
 Morris Anglim,
 Roy Archbold,
 Alfred Baldwin,
 Richard Bloomer,
 Walter Herbert Bowman,
 Amandus Bröcking,
 Lyman Smith Brown,
 Lewis Nathan Burke,
 Francis Charles Castell,
 Wesley Alonzo Chamberlain,
 John Franklin Conley,
 James Roy Davis,
 James Barnard Doyle,
 Ignatius Michael Duffy,
 Alfred Feilner,

RESIDENCE.
 Maidstone, England.
 Bay City.
 Decatur, Ind.
 Providence, R. I.
 Keithsburg, Ill.
 Toledo, O.
 Hamburg, Germany.
 Hudson.
 Niles.
 Pontiac.
 Muskegon.
 Dexter.
 Ann Arbor.
 Grand Rapids.
 Ann Arbor.
 Vienna, Austria.

David Willard Flint,
Robert Norman Forbes,
Charles Lester George,
Percy Robert Glass,
Claude Charles Goodes,
Richard Bertram Hamilton,
John T. Hardy,
Herold Martin Herron,
Joseph Foster Holland,
Robert Brown Howell,
Bessie Hutchinson,
Ulysses Simpson Jeffs,
George Norman Kimball,
Alexander H. Kimmond,
Marc Anthony Kroupa,
Carl Lebert,
Herbert Edgar Lehr,
James McMillan Loudon,
Chalmers J. Lyons,
Gail Haines McFarland,
Don Clyde McKinney,
Harry Brown McMillan,
Edwin Kirkhuff Medler,
Guy Raymond Palmer,
Clarence Edward Pease,
Edith Phillips,
Leslie Ward Platt,
Lester George Platt,
Thomas Crampton Reid,
John Martin Rich,
Fred Evart Robinson,
Claude Burns Roe,
John Blanden Rooke,
Ralph Jay Roper,
Frank Ernest Schlenker,
John Henry Setzler,
Philip Roper Smith,
John William Smoots,
Arthur Byron Snow,
Charles Fred Steinbaur,
Joseph Bishop Stewart,
John Howard Stofflet,
Arthur Milton Sweet,

Pittsburgh, Pa.
Centrelisle, N. Y.
Elkhart, Ind.
Cadillac.
Flint.
Detroit.
Alpena.
Williamston.
Rockvale, Col.
Columbus, O.
Ann Arbor.
Rockland.
Port Gamble, Wash.
St. Johns.
Mapleton.
Stuttgart, Germany.
Marine, Ill.
Traverse City.
Mt. Pleasant.
North Lewisburg, O.
Kalamazoo.
Grand Rapids.
Sault Ste. Marie.
Charlotte.
Saginaw, East Side.
Terre Haute, Ind.
Niles.
Niles.
Lapeer.
Horicon, Wis.
Trout Creek.
Buchanan.
Chelsea.
Jamestown, N. Dak.
Alma.
Vandalia.
Rushton.
Ann Arbor.
Chesaning.
Saginaw, West Side.
New York, N. Y.
Vicksburg.
Providence, R. I.

Daniel Michael Thompson,	<i>Detroit.</i>
Thomas Budd Van Horne,	<i>Franklin, O.</i>
Harry Melville Viel,	<i>Fenton.</i>
Philip Ernest Waugh,	<i>Cedar Falls, Ia.</i>
Oliver Wilson White,	<i>Chatham, Ont.</i>
Albert Crosswell Wilson,	<i>Ann Arbor.</i>
Bertha Mae Woodin,	<i>Ann Arbor.</i>
Lewis Denison Zincke,	<i>Chelsea.</i>

The following student, enrolled in the Department of Literature, Science, and the Arts, is also pursuing studies in the College of Dental Surgery:

Henry William Charles Bodecker, *New York, N. Y.*

Additional Names.

DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

RESIDENT GRADUATE.

NAME.	RESIDENCE.
Ella Louise Wagner, A.B., 1895,	<i>Ann Arbor.</i>

UNDERGRADUATES.

NAME.	DEGREE.	CREDIT.	RESIDENCE
Amy Angell Collier,			<i>Ann Arbor.</i>
William Everett Hartman, B.S. (Chem.) 59			<i>Chicago, Ill.</i>

Summer School, 1895.

STUDENTS.

NOTE.—Italic letters following a name show that the student is attending the University in the year 1895-6, and is enrolled in the department indicated:—*a*, denoting Department of Literature, Science, and the Arts; *e*, Department of Engineering; *m*, Department of Medicine and Surgery, *l*, Department of Law; *p*, School of Pharmacy; *d*, College of Dental Surgery.

NAME.	RESIDENCE.
Earnest Bennett Adams, <i>l</i> ,	<i>Los Angeles, Cal.</i>
Mary Joice Adams, <i>a</i> ,	<i>Normal, Ill.</i>
Harry B. Andrus,	<i>Nashville.</i>
Elliott Talbot Austin,	<i>Ypsilanti.</i>
Ida Lavinia Baker, B.S., <i>Northern Indiana</i> <i>Normal Univ.</i> ,	<i>Woodville, O.</i>
Ralph Balch,	<i>Kalamazoo.</i>
James William Bannon, Jr., <i>a</i> ,	<i>Portsmouth, O.</i>
Bertha Emily Barber, <i>a</i> ,	<i>Norwalk, O.</i>
Abby Louise Barney,	<i>Ann Arbor.</i>
Adelbert C. Baur,	<i>Ann Arbor.</i>
Adelaide Baylor,	<i>Wabash, Ind.</i>
Ira Alanson Beddow, Ph.B.,	<i>Beddow.</i>
William Bellis,	<i>Quincy.</i>
Howard Bement, <i>a</i> ,	<i>Lansing.</i>
Arthur Harold Benefiel, <i>a</i> ,	<i>Ann Arbor.</i>
John Walter Frink Bennett, <i>e</i> ,	<i>Austin, Ill.</i>
Lilian Marion Bigham, <i>a</i> ,	<i>Ann Arbor.</i>
Joseph Biscomb,	<i>Cassopolis.</i>
Melia Biscomb,	<i>Cassopolis.</i>
Georgiana Cleis Blunt, <i>a</i> ,	<i>Ann Arbor.</i>
Robert Collyer Bourland, <i>a</i> ,	<i>Peoria, Ill.</i>
Wilbur Pardon Bowen,	<i>Ypsilanti.</i>
Bert John Bradner, <i>a</i> ,	<i>Plymouth.</i>
Amasa Kellogg Brown,	<i>Duluth, Minn.</i>
Ernest Edward Bubbs, <i>d</i> ,	<i>Gloucester, England.</i>
Hambden Buel,	<i>Ann Arbor.</i>
Hillhouse Buel,	<i>Ann Arbor.</i>
Maude Burrows,	<i>Ann Arbor.</i>

Eugene R. Carpenter, <i>m</i> ,	<i>Knobnoster, Mo.</i>
Lewis Clinton Carson, A.B., A.M., <i>Harvard</i>	
<i>University,</i>	<i>Detroit.</i>
Lucy May Champion,	<i>Three Rivers.</i>
Lizzie Grace Charlton, <i>a</i> ,	<i>Louisville, Ky.</i>
Clarence Day Clark, <i>a</i> ,	<i>Northville.</i>
George Frank Clukey, <i>a</i> ,	<i>Mt. Clemens.</i>
Emmons Collins, <i>c</i> ,	<i>Western Springs, Ill.</i>
Frank Coolbaugh Condon, <i>a</i> ,	<i>Ann Arbor.</i>
Merritt S. Conner, <i>c</i> ,	<i>Paw Paw.</i>
Willis Gurdon Cook, <i>m</i> ,	<i>Grand Blanc.</i>
Jane Elizabeth Cooke,	<i>Monroe.</i>
Rose M. Cooper,	<i>St. Louis, Mo.</i>
George William Cottrell, <i>a</i> ,	<i>Detroit.</i>
Charles Herbert Covell, A.B.,	<i>Napoleon.</i>
Robert Patterson Cross,	<i>Chicago, Ill.</i>
Neil Manson Currie,	<i>Canton, O.</i>
Mary Agnes Dangel, <i>m</i> ,	<i>Fort Jones, Cal.</i>
Fremont Dayton Davis,	<i>Negaunee.</i>
Edna Daisy Day, <i>a</i> ,	<i>Plainfield, N. J.</i>
Robert Louis Dean, <i>a</i> ,	<i>Hinsdale, Ill.</i>
Edwin DeBarr, B.S., <i>Mich. Agricultural</i>	
<i>College, Ph.B.,</i>	<i>Norman, O. T.</i>
Mira Lloyd Dock, <i>a</i> ,	<i>Harrisburg, Pa.</i>
Frank Dunkin, A.B., <i>National Normal Uni-</i>	
<i>versity,</i>	<i>Wichita, Kan.</i>
Eda Eysenbach,	<i>Delphos, O.</i>
Ira L. Forbes,	<i>Ithaca.</i>
Arthur Ernest Gale, <i>m</i> ,	<i>Haverhill, Mass.</i>
William Aaron George, M.D., <i>m</i> ,	<i>Battle Creek.</i>
Luman Webster Goodenough, <i>a</i> ,	<i>Ludington.</i>
Orville Edwin Gorman,	<i>East Carondelet, Ill.</i>
Charles Henry Gray, B.L., <i>a</i> ,	<i>Ann Arbor.</i>
Stephen Marshall Hadley, Ph.B., <i>Penn Coll.,</i>	<i>Oskaloosa, Ia.</i>
Harry Lawrence Hall, M.D., <i>a</i> ,	<i>Ann Arbor.</i>
Omar Israel Hall, <i>c</i> ,	<i>Ann Arbor.</i>
Roy Mitchell Hardy, <i>a</i> ,	<i>Waterloo, Ill.</i>
David N. Harper,	<i>Milford.</i>
Emily Augustine Harper, <i>a</i> ,	<i>Detroit.</i>
Norman Follett Harriman,	<i>Ann Arbor.</i>
Jessie Gertrude Harris, Ph.B.,	<i>Ann Arbor.</i>
Louise Mather Harris, Ph.B.,	<i>Ann Arbor.</i>
Bernice Lena Haug, B.S.,	<i>Battle Creek.</i>

Josiah Edwin Hickman,	<i>Benjamin, Utah.</i>
Arthur Pomeroy Hicks,	<i>Rome.</i>
Agnes Hogan,	<i>Cherokee, Ia.</i>
Ellen Clara Hogeboom, M.S., <i>a</i> ,	<i>Saginaw, West Side.</i>
Margaretha Elise Catherine Horn, B.S., <i>Kansas State Agricultural Coll., a</i> ,	<i>Manhattan, Kan.</i>
Andrew Jackson Howard, A.B., <i>Rust Coll.,</i>	<i>Ebenezer, Miss.</i>
Mary Helen Stewart Hudson, <i>a</i> ,	<i>Ann Arbor.</i>
Edwin Haynes Humphrey, <i>a</i> ,	<i>Detroit.</i>
Willard Hunter Hutchings, B.L., <i>m</i> ,	<i>Leslie.</i>
Lambert Lincoln Jackson, <i>a</i> ,	<i>Ypsilanti.</i>
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Will Edward Janes, <i>a</i> ,	<i>Saginaw, East Side.</i>
Samuel Allen Jeffers, A.B., <i>Central Wesleyan Coll., a</i> ,	<i>New Florence, Mo.</i>
Estelle Jenney,	<i>Ann Arbor.</i>
Louise John,	<i>Delphos, O.</i>
John Blaine Keating, <i>c</i> ,	<i>Helena, Mon.</i>
Herbert Perry Kellogg, M.D.,	<i>Battle Creek.</i>
Harry Vallandigham Kepner,	<i>Denver, Col.</i>
Marie Kirchhofer,	<i>Manchester.</i>
James Ellsworth Kirtland, <i>a</i> ,	<i>Gregory.</i>
Gustave Knab, <i>l</i> ,	<i>Armor, N. Y.</i>
James W. T. Knox, Ph.C., <i>p</i> ,	<i>Ann Arbor.</i>
John Albert Kreis, Jr., <i>c</i> ,	<i>Cincinnati, O.</i>
Stephen Langdon,	<i>Ida.</i>
Gottlieb Albert Lange,	<i>Dayton, O.</i>
Fred Augustus Leas, <i>a</i> ,	<i>Ann Arbor.</i>
Hugo Legler,	<i>Evansville, Ind.</i>
Lewis W. Leisenring,	<i>Eaton Rapids.</i>
Walter Schon Lenk,	<i>Toledo, O.</i>
Edward Anthony Leszczynski,	<i>Sand Beach.</i>
Guy Metcalf Lisk,	<i>Blandinsville, Ill.</i>
John Loeffler,	<i>Decatur, Ill.</i>
Andrew J. Lynd,	<i>Saginaw, East Side.</i>
Arthur Eugene Maas, <i>c</i> ,	<i>Negaunee.</i>
Susanne Onins Macauley,	<i>Ann Arbor.</i>
Alexander Few Maitland, <i>c</i> ,	<i>Negaunee.</i>
James Halsey Mallory, Jr., A.B.,	<i>Detroit.</i>
Hans Mannhardt,	<i>Chicago, Ill.</i>
Wilfred Hamilton Manwarren,	<i>Ann Arbor.</i>
William Allen Markey,	<i>Saginaw, East Side.</i>
Lois Marshall,	<i>Nashville.</i>

Masaichiro Mayama, <i>l</i> ,	<i>Mochituki, Japan.</i>
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<i>Agricultural College,</i>	<i>Homer.</i>
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William McCracken, A.B.,	<i>Beaver Falls, Pa.</i>
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Emma McPhillips,	<i>Saginaw, West Side.</i>
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Edward Menkin, <i>l</i> ,	<i>Pittsburgh, Pa.</i>
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<i>lege,</i>	<i>Marquette.</i>
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Lillie Parker,	<i>Saginaw, West Side.</i>
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Inez Christabel Perrin, <i>a</i> ,	<i>Chicago, Ill.</i>
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George Charles Pratt, <i>e</i> ,	<i>Constantine.</i>
Flora Prowdley, <i>a</i> ,	<i>Ann Arbor.</i>
Harrison McAllister Randall, Ph.M.,	<i>Logansport, Ind.</i>
Thomas Benton Reeder, <i>l</i> ,	<i>Ann Arbor.</i>
John Frederick Rinsey, <i>e</i> ,	<i>Sturgis.</i>
William Harrison Rippey, <i>e</i> ,	<i>Jackson.</i>
Eudora Van Dusen Robison,	<i>Ypsilanti.</i>
Arda Bates Rorison,	

Alice Eleonore Rothmann, <i>a</i> ,	<i>Ann Arbor.</i>
Arthur James Sanderson, M.D., <i>Cooper</i>	
<i>Medical College,</i>	<i>South Amherst, Mass.</i>
Mary Schell,	<i>Montezuma, Ia.</i>
Matilda Mary Schroeder,	<i>West Bay City.</i>
Allen Joshua Seney, <i>a</i> ,	<i>Toledo, O.</i>
Bertha Marion Sherwood, <i>a</i> ,	<i>White Cloud.</i>
Chilton Rupert Stearns,	<i>Sheridan.</i>
Wellington D. Sterling, <i>a</i> ,	<i>Hastings.</i>
Martha Theresa Sturgis, <i>a</i> ,	<i>Ann Arbor.</i>
Arthur Charles Tagge,	<i>Monroe.</i>
Joseph Harry Taylor, <i>a</i> ,	<i>Ann Arbor.</i>
Firman Thompson, <i>a</i> ,	<i>New Carlisle, O.</i>
John Beach Tillotson, <i>a</i> ,	<i>Owosso.</i>
Elmer Kelso Towl,	<i>Decatur, Ill.</i>
Maud Louise Towl,	<i>Decatur, Ill.</i>
Carolyn Hobbs Trueblood,	<i>Ann Arbor.</i>
Irwin Joseph Truman, B.S., <i>Highland Park</i>	
<i>College, I,</i>	<i>Sloan, Ia.</i>
Frank Underwood,	<i>Chicago, Ill.</i>
George Andrew Van Fradenburg, <i>m</i> ,	<i>Liberty, N. Y.</i>
Joseph Henry Van Tassel, LL.M., <i>a</i> ,	<i>Detroit.</i>
Hadley Horton Walch, <i>a</i> ,	<i>Grand Rapids.</i>
William Edwin Watt,	<i>Carbondale, Pa.</i>
Simon Weinberg,	<i>Ann Arbor.</i>
Daniel John Wessels, <i>a</i> ,	<i>Cape Town, South Africa</i>
Francis Henry Wessels, <i>a</i> ,	<i>Battle Creek.</i>
Ethelwyn Whalley, B.L., <i>Olivet College,</i>	<i>Nashville.</i>
William Isaac Whitaker, <i>m</i> ,	<i>Chelsea.</i>
Lloyd Charles Whitman, <i>a</i> ,	<i>Ann Arbor.</i>
William Lincoln Whitney, Ph.B.,	<i>Mt. Clemens.</i>
Eva Amelia Wier, <i>a</i> ,	<i>Mason City, Ia.</i>
Ella Goodenow Willcox,	<i>Wellesley, Mass.</i>
Carl Benezette Williams, <i>e</i> ,	<i>Western Springs, Ill.</i>
Mabel Willison, <i>a</i> ,	<i>Decatur.</i>
Katherine D. Wiltsie, <i>a</i> ,	<i>Detroit.</i>
Clarence George Wrentmore, B.S.,	<i>Ann Arbor.</i>
Lewis Zeile,	<i>Fraser.</i>
Alois Lawrence Ziliak, <i>m</i> ,	<i>Haubstadt, Ind.</i>

Summary of Students.

DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

Holders of Fellowships	2
Resident Graduates	57
*Candidates for an Advanced Degree, enrolled in other departments	6
Graduates Studying <i>in Absentia</i>	9
Undergraduates:	
Candidates for a Degree	919
Students not Candidates for a Degree	211—1204

DEPARTMENT OF ENGINEERING.

Resident Graduates	6
Graduates Studying <i>in Absentia</i>	6
Undergraduates:	
Candidates for a Degree	299
Students not Candidates for a Degree	20— 331

DEPARTMENT OF MEDICINE AND SURGERY.

Resident Graduates	12
Fourth Year Students	58
Third Year Students	84
Second Year Students	107
First Year Students	177
*Students enrolled in the Department of Literature, Science, and the Arts:	
Third Year Student in Medicine	1
Second Year Students in Medicine	2
First Year Students in Medicine	9
*Students enrolled in the School of Pharmacy:	
First Year Students in Medicine	2— 452

DEPARTMENT OF LAW.

Resident Graduates	26
Seniors	344

* Included in the Summary by States only in the departments in which they are enrolled.

Second Year Students	23
First Year Students	246
Special Students	21
*Students enrolled in the Department of Literature, Science, and the Arts	15— 675

SCHOOL OF PHARMACY.

Holder of Stearns Fellowship	1
Undergraduates:	
Candidates for a Degree	72
Students not Candidates for a Degree	10— 83

HOMŒOPATHIC MEDICAL COLLEGE.

Fourth Year Students	6
Third Year Students	3
Second Year Students	7
First Year Students	11— 27

COLLEGE OF DENTAL SURGERY.

Seniors	62
Juniors	59
Freshmen	67
*Student enrolled in the Department of Literature, Science, and the Arts	1— 189

 2961

Deduct for names counted more than once . . .	44
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Total	2917
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SUMMER SCHOOL OF 1895.

Total in the School	187
Deduct for names counted in other departments	90— 97
Grand Total	3014

* See foot note on page 327.

SUMMARY BY STATES AND BY DEPARTMENTS.

	Lit. Dept.	Engi- neering.	Med. & Surg.	Law Dept.	Phar.	Hom.	Dent.	Total.
an	733	203	223	243	36	19	119	*1631
i	160	55	24	85	5	—	7	†336
. . . .	49	17	34	67	11	4	13	†195
a	35	8	19	34	3	—	8	†110
ork	21	7	28	15	7	2	7	87
ylvania . .	15	7	16	43	1	—	3	85
. . . .	34	1	11	25	3	—	2	76
ri	17	2	7	23	2	—	—	51
asin	8	4	11	8	2	—	4	37
s	6	—	3	12	1	—	1	23
nia	5	—	3	13	—	—	1	22
do	6	5	2	4	2	—	2	21
chusetts . .	2	2	11	5	—	1	—	21
sota	9	1	4	5	1	—	1	21
ika	—	4	2	12	3	—	—	†21
cky	6	—	2	5	3	—	—	16
na	5	3	2	4	—	—	—	14
i	1	—	2	7	—	—	—	10
. . . .	3	—	—	7	—	—	—	10
ampshire . .	5	—	2	1	—	—	—	8
Dakota . .	—	—	3	3	—	—	1	7
Dakota . .	3	—	1	3	—	—	—	†7
ngton . .	—	—	2	4	—	—	1	7
ing	1	1	—	5	—	—	—	7
essee	2	—	2	2	—	—	—	6
as	2	—	—	2	1	—	—	5
t of Columbia	3	2	—	—	—	—	—	5
. . . .	—	—	2	—	—	—	2	4
ersey	2	—	1	1	—	—	—	4
lexico . . .	—	1	—	3	—	—	—	4
Island . . .	—	—	2	—	—	—	2	4
. . . .	—	2	—	2	—	—	—	4
cticut . . .	—	—	3	—	—	—	—	3
. . . .	—	—	—	3	—	—	—	3
ana	1	1	1	—	—	—	—	3
ippi	—	2	—	1	—	—	—	3
Carolina . .	—	—	2	1	—	—	—	3
nd	—	—	—	1	1	—	—	2

educt three for names counted twice.

educt one for name counted twice.

330 *Summary by States and by Departments.*

Nevada	—	—	—	2	—	—	—	2
West Virginia	—	1	—	—	1	—	—	2
Arizona	1	—	—	—	—	—	—	1
Georgia	—	—	1	—	—	—	—	1
Oklahoma	—	—	1	—	—	—	—	1
Vermont	—	—	1	—	—	—	—	1
Virginia	—	—	—	1	—	—	—	1
Ontario	—	—	4	5	—	—	7	16
China	1	—	3	—	—	—	—	4
England	—	—	—	—	—	—	4	4
Japan	1	1	—	2	—	—	—	4
Germany	1	—	—	—	—	—	2	3
Hawaiian Islands	1	—	—	1	—	—	—	2
Austria	—	—	—	—	—	—	1	1
Barbados	—	—	1	—	—	—	—	1
Bulgaria	—	1	—	—	—	—	—	1
Norway	—	—	1	—	—	—	—	1
Province of Quebec	—	—	—	—	—	1	—	1
Russia	—	—	1	—	—	—	—	1
South Africa	1	—	—	—	—	—	—	1
Total	1198	331	438	660	83	27	188	*2925

*Deduct eight for names counted twice.

Officers of University Alumni Associations.

FOR THE YEAR 1895-96.

DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

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